Doc.
N.S
M
TN
27
N8 A21
1897

REPORT

OF THE

DEPARTMENT OF MINES

NOVA SCOTIA,

FOR THE YEAR ENDING SEPTEMBER 30, 1897.

HALIFAX, N. S.:
COMMISSIONER OF PUBLIC WORKS AND MINES
QUEEN'S PRINTER.
1898.

Holloway Bros., Printers, 69 & 71 Granville St.

REPORT

OF THE

DEPARTMENT OF MINES,

NOVA SCOTIA,

FOR THE YEAR ENDING SEPTEMBER 30, 1897.

HALIFAX, N. S.:
COMMISSIONER OF PUBLIC WORKS AND MINES.
QUEEN'S PRINTER.
1898.

Holloway Bros., Printers, 69 & 71 Granville St.

INTERCOLONIAL RAILWAY.

Statement showing the various kinds of Coal (in tons) received from the different Mines for the use of the Intercolonial Railway from 1st October, 1896, to 30th September, 1897.

MONTH.	Canada Coals & Railway Co. Joggins.	Cumberland Railway and Coal Co. Springhill.				Acadia Coal Co. Acadia, Albion and Vale.			Intercolonial Co. Drummond.		Dominion Coal Co.		General Mining Associat'n.
	Round.	Round.	Run of Mine.	Nut.	Slack.	Round.	Slack.	Coke.	Round.	Slack.	Round.	Slack.	Round.
October, 1896	2252	5430	......	122	386	1572	......	......	1923	......	2542	......	....
November, "	1145	3979	......	......	847	1925	56	......	1422	......	2274	......	....
December, "	1123	5632	......	......	1072	2194	34	......	1860	18	865	13	....
January, 1897	2173	2644	......	......	204	3819	32	......	4440	36	369	30	210
February, "	1142	1355	......	......	176	4731	119	......	4866	......	114	17	194
March, "	1910	6619	......	......	1202	2961	48	......	1621	......	389	......	407
April, "	2047	5997	975	......	1062	2929	30	11	480	......	269	......	453
May, "	2183	5493	......	......	302	1748	63	......	1460	......	3116	......	374
June, "	1376	4357	......	......	440	1705	14	......	1097	......	3746	......	70
July, "	1021	1681	......	......	168	1841	32	......	1328	......	3511	......	310
August, "	1959	4311	......	......	381	1638	56	......	942	......	6961	......	645
September, "	1311	3629	......	......	740	2067	54	......	1686	......	6382	......	518
	19642	51127	975	122	6980	29130	538	11	23135	54	30538	60	3181

INTERCOLONIAL RAILWAY.

Statement showing the number of Tons of Coal received at the following Stations from the Mines in Nova Scotia, during the year ended the 30th September, 1897.

Destination.	Tons.	Destination.	Tons.
Halifax	41,401½	Har. au Bouche	56½
Dartmouth	2,914¼	Mulgrave	638¼
Waverley	571	Hastings	70
Bedford	4,983½	McIntyre's Lake	7
Windsor Junction	9,548	Grand Narrows	20¾
Wellington	19	North Sydney	72¾
Enfield	230¼	Sydney	90
Elmsdale	244¾	Belmont	26
Milford	32½	DeBert	6½
Shubenacadie	282½	East Mines	71¼
Stewiacke	445½	Londonderry	8,104½
Brookfield	115¾	Westchester	12
Truro	12,154½	Greenville	19
Valley	19½	Oxford Junction	6
Riversdale	6½	Oxford	752¾
West River	26	Pugwash Junction	18
Glengarry	17½	Pugwash	480
Hopewell	1,042	Wallace	105½
Ferrona Junction	69,583	Ross Road	42
Stellarton	2,582¾	Tatamagouche	414½
Westville	6½	Denmark	78
Sylvesters	99	River John	363½
New Glasgow	7,375¾	Meadowville	24
Trenton	43,896	Scotsburn	150
Picton Landing	46,694¼	Scotch Hill	248
West Merigomish	6	Pictou	8,541
Merigomish	205½	Saltsprings	12
Avondale	26	Springhill	123
James River	13	Athol	13½
Antigonish	2,503¾	Maccan	12
South River	18	Nappan	12
Pomquet	12¼	Amherst	13,128¼
Heatherton	52	Aulac	267½
Bayfield	61¼	Sackville	3,933
Tracadie	73½	Dorchester	1,202¼

INTERCOLONIAL RAILWAY.—*Continued.*

Destination.	Tons.
Memramcook	306
Painsec Junction	6
Shediac	424
Point du Chene	120¼
Moncton	12,981¼
Salisbury	971
Petitcodiac	528
Penobsquis	6
Sussex	300½
Apohaqui	6½
Norton	53½
Bloomfield	12
Hampton	237
Rothesay	111½
Coldbrook	311
St. John	7,627
Harcourt	6
Kent Junction	354¾
Rogersville	18
Chatham Junction	7,126½
Millerton	71
Indiantown	6
Derby Junction	6½
Newcastle	70¼
Gloucester Junction	1,081
Bathurst	95
Petite Roche	12
Nash's Creek	12
New Mills	22
Charlo	12½
Dalhousie Junction	13
Dalhousie	252
Campbellton	294¾
Metapedia	393

Destination.	Tons.
Amqui	18
Cedar Hall	13
Ste. Octave	6
Ste Flavie	6
St. Luce	20
Bic	12
St. Fabien	6
Trois Pistoles	48
St. Eloi	12
Isle Verte	12
Riv du Loup	2,376
St. Henri Junction	8,743¼
Chaudiere Junction	17,187
Levis	17
Point Levis	16¾
G. T. R. via Chaudiere	3,678
C. P. R. via St. John	11,166
Total	363,569

RECAPITULATION.

Forwarded from	
Stellarton	191,630
Westville	11,558
New Glasgow	37,762½
Sydney	898½
Springhill	88,824
Maccan	32,896
Total	363,569

INDEX.

PAGE.

Summary of Production 3
Coal—Pictou and Cumberland and Counties Deputy Inspector's report 6
" Cape Breton County and Deputy Inspector's report 21
" Miscellaneous 32
Gold 33
Iron Mining 49–52
Leases, list of 54
Tables:—Coal—Trade by Counties, etc 61
" Colliery Production 65
" Labor Returns 66
" Exports to United States 67
" Sales, 1775 to 1897 68
Gold—General Statement 69
" Monthly Statements 70
Miscellaneous Returns:
Coal Shipments, Intercolonial Railway, etc 80

Digitized by the Internet Archive
in 2011 with funding from
University of Toronto

http://www.archive.org/details/annualreportonmi1897nova

DEPARTMENT OF MINES.

REPORT FOR THE YEAR ENDING SEPTEMBER 30, 1897.

To His Honor MALACHY BOWES DALY, *Esquire, Lieutenant-Governor of Nova Scotia, &c., &c.*

MAY IT PLEASE YOUR HONOR,—

I respectfully present herewith to Your Honor the Annual Report of the Inspector of Mines, containing an account of the progress of mining operations, together with statistical information compiled by him from official and other returns.

I remain,

Your Honor's obedient servant,

CHARLES E. CHURCH,
Commissioner of Public Works and Mines.

HALIFAX, *December 30th, 1897.*

REPORT

ON THE

MINES OF NOVA SCOTIA,

BY EDWIN GILPIN, JR., A. M., LL. D.,

FELLOW OF THE ROYAL SOCIETY OF CANADA.

OFFICE OF INSPECTOR OF MINES,

HALIFAX, *December 29th, 1897.*

TO THE HONORABLE
CHARLES E. CHURCH, M. P. P., M. E. C.,
Commissioner of Public Works and Mines:—

SIR,—I beg leave to submit the following report on the Mines of Nova Scotia.

The following summary shows, so far as I have been able to learn, the mineral production of Nova Scotia for the year ending September 30th, compared with that for the year ending September 30th, 1896:

		Year ending Sep. 30, 1896.	Year ending Sep. 30, 1897.
Gold	oz	26,112	26,579
Iron Ore*†	Tons	56,334	44,146
Manganese Ore†	"	129	100
Coal raised†	"	2,235,472	2,320,916
Coke made†	"	58,741	45,000
Gypsum†‡		130,489	125,000
Grindstones, etc§		30,317	32,400
Limestone†	Tons	31,171	25,000
Copper Ore†	"	10	....
Graphite†	"	175	....

* Not including imported ore.
† Ton of 2,240 lbs.
‡ Amount exported.
§ Value in dollars.

During the period under review the work of the Department was carried on much as usual. Owing to the increased number of applications for gold areas, sickness and other causes, the office work of the Department has unavoidably fallen into arrears. Late at the close of the year an addition was made to the office force, and an attempt will be made during the winter to have all the work brought up to date. In this connection I wish to refer to the many representations that have been made to you about the inadequacy of the space allotted the Mines Department. It is entirely too small, and is the subject of continual complaint by all who do business with the Department. This most important Department should have at least twice the space it now has.

An examination for colliery officials was held as usual and the following received certificates:

Francis Burrows,	Maccan,	Manager.
Hugh Campbell,	Pt. Morien,	"
Norman McKenzie,	Reserve,	"
Geo. N. Greenwell,	Old Bridgeport,	"
Alex. McKinnon,	Pt. Morien,	"
Jeremiah McLean,	Victoria,	U. Manager.
Pat Carroll,	"	"
Murd. Morrison,	Pt. Morien,	"
Angus McKergan,	Sydney Mines,	"
Syd. Greer,	Joggins,	"
R. J. McDonald,	Springhill,	"
C. J. Albon,	"	"
Geo. R. Oulton,	"	"
Walter Johnson,	Joggins,	"
Edw. Doyle,	"	"
Jno. T. Morrison,	Westville,	"
Alex. Sutherland,	Thorburn,	"
J. P. Boutlier,	Old Bridgeport,	"
Jno. Caddegan,	Bridgeport,	"
Jno. McDonald,	Pt. Morien,	"
Dan. A. Ferguson,	Bridgeport,	"
P. H. S. Blakemore,	Glace Bay,	"
Simon Lot,	"	"
W. A. McKenzie,	Caledonia,	Overman.
Malcolm Stewart,	Sydney Mines,	"
John Britton.	Westville,	"
A. Liddle,	Joggins,	"
A. McLellan,	Westville,	"
Robt. Lauchlin,	"	"
Geo. Wright,	"	"
Wm. Gray, jr,	"	"

Absalom Beaton,	Thorburn,	Overman.
Geo. Mills,	Westville,	"
D. G. Love,	Thorburn,	"
Pat Walsh,	Bridgeport,	"
Jno. Casey,	Caledonia,	"
Neil McDonald,	Bridgeport,	"
Alex. S. McNeil,	Old Bridgeport,	"
Mich. E. McNeil,	Bridgeport,	"
Martin Weir,	Old Bridgeport,	"

In all 163 Overmans, 139 Underground Managers, and 46 Managers' Certificates, have been granted, in addition to 45 certificates of service.

An examination for granting Certificates to Engine drivers was held during the fall at North Sydney. The members of the Board are Mr. Jas. Floyd, Westville; Mr. John Barrington, Baddeck; and Mr. D. Murray, Springhill.

The following received Certificates:

John M. Francis,	Sydney Mines,	Third Class.
G. A. Oram,	"	"
Jas. J. Francis,	"	"
D. H. McDonald,	"	"
D. L. McDonald,	Sydney,	"
Thos. N. Ratchford,	Victoria,	"
Neil McDonald,	Bridgeport,	"
Ken. Morrison,	"	"
Dan. A. McDonald,	"	"
Alex. McPhail,	Dominion No. 1,	"
Dan Brophy,	Victoria,	Second Class.
J. J. McKinnon,	Sydney Mines,	"

The local Boards of examiners at the different collieries have continued to grant certificates to miners and shot firers as usual.

During the past season the Surveyors employed by the Department have been working at the extension of the base line at Fifteen Mile Stream, at Greenfield, and Upper Seal Harbor. Areas were laid off at Mount Uniacke, Harrigan Cove, Oldham, Pleasant River Barrens, Vogler's Cove, Renfrew, Cow Bay, Brookfield, &c.

The lines at Malaga were retraced. The Cranberry Head district was relocated. The Montagu base line was extended to the west. Some work was done at Sheer's Point, and at New Germany and Meander River. The Moose River district was located, corner posts put down, and the base line extended about a mile to the westward.

COAL TRADE.

The returns of coal sales during the year 1897, show in comparison with the year before as follows:

	1896.	1897.
Nova Scotia	666,403	641,308
New Brunswick	252,293	242,043
P. E. Island	94,236	62,032
Newfoundland	63,000	75,990
Quebec	795,060	875,874
West Indies	1,222	9,356
United States	174,919	106,279

The production was 2,320,916 tons compared with 2,235,472 tons in 1896.

The home sales show a slight decrease, as do those to New Brunswick and Prince Edward Island. The sales to Quebec show a decided increase, while those to the United States show a decided falling off.

CUMBERLAND COUNTY.

The operations at the Springhill Mines were hampered by a fire in the upper portion of the East Slope, which is more fully described by the Deputy Inspector in his report. The fire caused the total destruction of the hoisting and pumping slopes above the 800 feet level. The section of the mine most directly affected was isolated and the fire smothered by steam. At the close of the year the work of reopening the burned section had been commenced. It is not intended to repair the slope, but it was considered essential that the fire should be extinguished totally. The mining operations were further impeded by a strike of the workmen.

At the Joggins Mines the number two and three slopes have been connected. The sales of the County were 339,220 tons compared with 422,783 tons in 1896. The small mines worked a short time during the winter. A little prospecting has been carried on by Mr. Hickman and other Amherst parties, and the passage of the coal beds followed further to the East.

PICTOU COUNTY.

The sales from this County were 340,234 tons against 351,693 tons during the preceding year. There were only two Companies in operation, the Acadia and the Intercolonial, producing respectively 213,050 and 173,818 tons.

The operations at the mines in Cumberland and Pictou Counties, which have been repeatedly examined by Mr. Maddin, Deputy Inspector, will be found fully described by him in his report presented herewith.

Westville, N. S., 6th Oct., 1897.

E. Gilpin, Esq.,
Dep. Commissioner and Inspector of Mines for the Province of Nova Scotia.

Dear Sir,—I have the privilege of herewith submitting you a condensed report on the various coal mines in the districts of Pictou and Cumberland Counties, for the year ending September 30th, A. D., 1897.

McGREGOR PIT, ALBION MINES.

In my last report I stated, that they were sinking in the McGregor slope. I beg to say, this continued until last March when the mine was stopped, and the men transferred to the Third Seam slope, but they have begun sinking again in this pit, and intend to continue down into the "basin." It is now down some 5000 feet. This is about all the work doing in this mine at present.

THIRD SEAM SLOPE.

There was not much work done in this mine until last April, when they began to sink and are now down about 700 feet, the coal looks very good. On the west side another balance has been started off, driving up hill, and will soon be completed. When this balance is finished and ready for work the new lift should likewise be ready. This will afford capabilities for quite an output of coal. This is about all that has been done in this seam during the year, excepting necessary repairs and work of that description.

THE CAGE PIT SEAM.

In this mine all the work has been on the west side, except drawing pillars in one balance, and also a small amount of work done in the Fleming Seam which is four (4) feet thick, and worked on the long wall system. I am pleased to report that the pillars are now worked out and a satisfactory percentage of coal obtained from the balance of which I made mention last year, where considerable difficulty was met with in drawing the pillars. I would further add that the longwall working overlying them is worked out; this finishes another square of work on the east side.

The west side level has been driven constantly throughout the year, and is now in some 6000 feet. The coal continues good.

The operations are still continued in the balance spoken of in my last report as being driven up inside the old Cage pit levels. Driving the boards forward a large amount of coal has been won here, and the level is kept advancing. The levels in the Cage pit sinking are being driven continually when there is work, and are now in from the sinking on west side some 3000 feet, and about the same on the east side, there is one balance up on each side 1000 feet inside the sinking, this makes a block of coal on each side 1000 × 600 ft. ready to be taken out. The levels are kept going east and west. There has been considerable work done in what is called the "little drifts" which connect the Cage pit and Ford pit seams. Some four years ago there were stoppings put in, which from the effects of subsidence and water began to leak, these have been clayed and rebuilt, making them tight, and the road leading down into the Ford pit is being cleaned and timbered, this road is in the Cage pit coal. The idea is to clean and timber this down to the water in the Ford pit, and drive through from the Third seam across the measures and connect the two seams at this point, which is the bottom of the last sinking in the Third seam. This tunnel will then, when completed, connect the lower lift of Cage pit with the lower lift of Third seam, and will open up a large area of coal in this district. These pits have not been worked during the year, (for want of market I presume) as steadily as might be desirable.

THE SIX FEET SEAM, THORBURN.

Last year I reported the coal as being principally obtained from the west side. This year the west levels have been driven in some 500 feet, and the coal continues good but low. There are two balances driven up twelve bords on one and twenty-four bords on the other, it is a double balance. In my last report I further said this slope was down into the "basin," and some work done on the north-west side. This year they have driven up 270 feet on the north-west side of the "basin" where there is five (5) feet of good coal lying at an angle of 10°.

A pair of levels has been started at the foot of the "basin" and driven north-easterly a distance of 430 feet from the engine way through an average thickness of 5½ feet of coal, which looks very good. A balance is being driven up from said levels, and is now nearly up. The underground engine which was used for hoisting out of the deep is transferred to the top of No. 1, balance, east side, making the haul some one hundred feet shorter and doing away with the use of two (2) horses. There is very little change on the east side since my last report. Considerable repairs have been made in airways and travelling ways during the year, and I may say the mine is in very good condition.

ACADIA MINE, WESTVILLE.

In my last report, I made mention of the new lift then being sunk, this lift when completed was 350 feet in depth, making the total length of slope from surface 4350 feet. This lift was driven some 20 feet wide and wooden packs 5 feet thick put in on each side all the way down, and was sunk faster and with less trouble to men or management then the preceding two lifts. On one side the packs were built close against each other and filled tightly with stone and slack coal, and by the enormous pressure became so tight that the air was conducted around it to the bottom and a return made by keeping a place open behind it. The 4 levels are turned off and the south levels are in 1000 feet. They are driven 6 yards wide with two rows of packs same as the slope, only from 6 to 9 feet of coal left in between the two levels, and at distances of from 40 to 50 feet openings are made through. The block of coal between the levels is left to form a tight partition. This mine is very fiery, and as a consequence, the air has to be kept well up to the working face. The levels on north side are in some 900 feet and are worked on the same system as those on the south side. The 4000 feet lift is kept in very good condition and the coal has been taken out from boundary line south side to a distance of 450 feet. As I stated in my last report, there are places driven up 150 feet every 280 feet and the coal taken out of the top first. About ⅓ of the coal is taken out of this lift and prospects seem very good for winning it all with very little trouble, under the present system of working, viz., longwall. At my last visit to the mine, the Barometer read 32° and Thermometer 76°, these figures appear somewhat uncommon, but when you take into consideration the great depth of the mine, viz., 4350 feet at an angle of 26° or nearly so, and further that about 1000 feet on this angle and nearly 6000 feet on the levels is carried on packs you will readily perceive the cause.

The pump house at the 2400 feet lift has been all rebuilt and some repairs made on the pump. There are now some 1100 feet of the travelling slope and 1000 feet of main slope on packs. Much care and trouble is still experienced in keeping open the return airways above the longwall workings. The levels on the north side were driven some

20 yards since my last report. The angle of the seam at this point being in the vicinity of forty or forty-five degrees and the coal interspersed with bands of slate and stone, it was deemed advisable to stop further extension along this level for the mean time.

No explosives are used in this mine, and on this side (north) twice they crossed a "fault" some twenty (20) yards thick, this was both a hard and expensive undertaking without the aid of explosives. The coal is, however, taken out of this side as successfully as in the south side, and the mine in general is in good condition.

THE DRUMMOND COLLIERY, WESTVILLE.

In my last report I spoke of a "squeeze" in this mine, on the south side from the No. 6 balance. This "squeeze" or "creep" seemed to follow the workings out, causing considerable trouble, still I am pleased to say that the coal was taken out as clean as any pillar work I have seen. The pillars are all out now on this side to No. 1 balance, and when No. 1 pillars are out there will be three hundred (300) feet left between the main slope and the "broken." There is yet the coal mentioned in my last report in No. 6 balance and No. 7 balance.

Two balances have been driven up from the 4400 feet level to the 4000 feet level, and on one of them which is but 540 feet from the face of south level, there are five (5) bords being worked. This level is in from the slope some 2900 feet, and on account of the coal being coarse, is stopped.

The mine bord on 4000 feet lift is carried on wooden butts for 1000 feet, this will probably keep open for the return from 4000 feet.

There is always great trouble and expense in keeping our returns open in our coal mines, and I agree with the management that it is better to make a permanent job at first. In this case I think this return is to all appearance satisfactory.

On north side of the 4000 feet lift the pillars have been taken out very cleanly, and are all out now except on No. 1 balance, and when this is out, there will be a block of 300 feet left in between the "broken" and the main slope.

On the 4400 feet lift two balances have been driven up on to the 4000 feet lift, and the levels extended some 500 feet. On the mine bord the pillars have been taken out as the levels were driven in, or in other words, there were some 500 feet of these levels on the 4400 feet lift driven longwall system, they took from fifty-seven (57) feet to sixty-five (65) feet of a cut in with them and kept two places open on "butts," the one for intake the other for return. One of the balances was driven up to the 4000 feet lift in this section, and has good air, so the "butts" must be very tight.

At this mine some three (3) years ago, a new fan was erected which has given good satisfaction, and as they have commenced sinking from the main seam to the second seam the old fan will be utilised in connection with this work, to air the second seam. The shaft will be sunk some 230 feet to make such connection.

In the No. 4 slope, which has been idle for some time, they began on the 27th of September to extract pillars at No. 5 lift to enable them to meet the pressing demand for coal.

SPRINGHILL MINES.

No. 1 Slope.—At this slope since my last report many changes have taken place. Eleven hundred (1100) boxes were then raised per day, but on Dec. 24th, 1896, a fire started in the pipe bord, at a point some 600 feet from the surface, closing down this slope completely. Several consultations were held between the officials and mines department, at which meetings it was finally decided to make every exertion to isolate the fire to as small an area as possible. This was accomplished after a considerable of hard work on the part of both officials and men.

There are four (4) places driven parallel with each other, viz., fan, pipe, main and travelling slopes. The fan slope stoppings were all made tight, and a stopping placed in at the 800 feet level across the pipe slope, then a stopping put in on same level on main slope; the air was conducted across to the east or travelling slope, and starting at the 800 feet level the stoppings were all closed to the surface. These stoppings were backed up with sand and another stopping built outside, which made double stoppings encircling the section in which the fire was. This work completed, three steam pipes were taken down the travelling way to the 800 feet level and across to pipe slope and let through the stoppings by pipes there placed for that purpose, also a pipe was erected at the mouth of the pipe slope from the surface and steam injected at a pressure of forty-five (45) lbs. for at least six (6) months. On the 14th of September the steam was stopped to allow this district to cool down, and before this report will be published I expect to learn that the fire is stamped out. Men have been employed day and night from the day the fire broke out until the present time, in this section of mine, looking after it. The temperature was taken there (3) times every twenty-four hours, and written reports made by those in charge every eight (8) hours. The pumps and haulage engine with pipes and rails are all withdrawn from this slope but the airway and levels are kept under repairs. The management intends to take those slope pillars all out, and convey the coal down hill, as there are two (2) connections by tunnels to the No, 2 slope, and the coal from the slope pillars and level pillars of the 1900 feet level will be taken up No. 2 slope.

No 2 slope, being connected by tunnels with No. 1, was closed down at the same time, with the exception of a small section. However, in a short time it was decided to prepare it for a pumping plant owing to No. 1 pumps being disabled, and accordingly work was commenced at different places in No. 2 slope brushing down and cleaning up. Iron booms were used in making such repairs, and on July 18th 2300 feet were completed, and at this point the Janesville pump which had been purchased last year for No. 1 slope was removed to this station, and for the 1300 feet level a new Janesville 28 × 9 × 36 was purchased. Two (2) new pump houses 31' × 14' were built at both stations, also 550 feet of ten (10) inch pipe was purchased from I. Matheson & Son of New Glasgow, N. S. The steam is supplied through 6" pipes to these pumps. and they are covered with asbestos. Permanent brick stoppings have been put in on both sides of pipe bord and iron doors. The travelling way and pipe way from 1400 feet to 1900 feet lift have both been stripped and cleaned up and eight (8) feet of wood packs built in with steel rails for booms.

The No. 1 slope hoisting engine has been utilised for the east return of No. 3 slope, which has all been stripped, graded and re-timbered to the 1900 feet level, and will now be used for lowering men and timber as well as a return for one side of No. 3 slope. The power is transmitted from the east or No. 1 engine house to this return about 300 yards over pullies. At No. 2 slope operations have been commenced on a new boiler house which will be 128′ × 55′ the roof and sides will be of corrugated iron. It is well under way now. Work on New Bank house at No. 2 slope will commence immediately, as the framing is now on the ground, so that No. 2 will be in position shortly for a large output. All the underground work has been maintained in good condition.

No. 3 Slope.—The principal work at this slope throughout the year has been centered on 6, 7, 8 and 9, balances on 1800 feet level: driving bords and extracting pillars, although considerable coal has been taken from the 1300 feet level, which is now finished. The return was also extended from 1300 to 1900 at the extreme boundary. On east 1900 the pillars have been worked on a small scale owing to this district being short.

On January 3rd a tunnel was commenced to underlying seam, and on April 12th this seam 3', 9" was struck; on June 3rd a second opening was made for ventilation, levels east and west have been driven 1200′ and chutes driven at right angles. This seam is free from stone of any kind.

On January 6th repairs on pipe bord were commenced, this place stripped, cleaned and boomed partly with steel rails, from within one hundred and twenty-five (125') of surface to 1900 feet level, of which distance on account of the crippled condition, eighteen feet (18') more area was added.

The intake and return have received considerable attention, the east return from this slope is now being converted into a riding bord and this power will also be used to open up the sinkings in 2600 feet. This section made very little progress the first quarter of the year, on account of the accumulation of water at the time of strike. Since this was removed good progress has been made, and the levels are now in 600 feet and 800 feet respectively.

At a point 500 feet east from pipeway a chute was commenced which is now up some 200 feet. The thickness of coal is 3' 9". The west level is now in some 800 feet with coal 10 feet thick, in this level 570 feet from fanway, a balance and backhead are well advanced.

MINUDIE MINE.

This mine has been idle all the year.

SMITH'S MINE, MACCAN.

A little work was done here last winter, they sunk fifty (50) feet or so and the water was kept out until August. I think, however, that the water is near the top now. It has remained idle for the past two months.

THE SCOTIA MINE.

Work was carried on here for the first four or five months of the year, but it has been idle since. They will likely start this fall again as there is some local demand for coal.

CHIGNECTO MINE.

Nothing was done here last year.

THE JOGGINS MINES.

No. 2 Slope.—The only work being done here is on 1900 feet level, east side. There are two (2) levels and nine (9) gateways from which coal is taken. These levels have been driven during most part of the year as rapidly as possible, with two shifts. The management is pushing them to make connections with No. 3 slope for two reasons, first, water, second, air. Although the air has been very good during the past year, this connection would be of very great benefit to ventilation, and in the next place, there is no pump in No. 3 slope, and the water is hoisted in an iron tank 700 feet and let run into No. 2 slope, where the pump gets it and forces it to the surface. The amount of water in

No. 3 slope caused water to be hauled every night for most of the year until lately. The levels from No. 2 are so near through that the water is finding its way through the strata, and now it requires only a few hours every second or third night to keep the water out. The management is now pumping the water out of the 2600 feet lift in No. 2 slope, and when pumped out will start to sink in No. 3 slope and drive through to No. 3. In this way No. 2 will be kept for the pumps, the coal between No. 2 and No. 3 slope will be divided between both slopes.

No. 3 slope has at present a balance on the 600 feet lift with ten (10) places and two (2) balances on the 1900 feet lift giving 18 places. The 600 feet level has been driven a distance of about 500 feet during this year, it is now, however, idle, as the clay became very thick. Work was stopped as there was coal enough to meet the present demand. The 1300 feet is also idle for much the same reason. It was driven some 400 feet; about 50 feet from the face of the level a balance was started and was driven some 80 feet up. It is the intention of the management to start the 1300 feet level at an early date to prove the field of coal. There are two balances on the 1900 feet lift which have been just newly started through the longwall.

There are two pumps in use in No. 2 slope, but it is intended to replace them by one large pump capable of discharging the water up to the shore drain. When the connections are made between No. 2 and No. 3 slopes the expenses will be considerably reduced on ropes and machinery. Bad water for steam purposes has been the cause of another drawback at this colliery, but this is now fairly well overcome by the use of caustic soda and sodium phosphate, for the purpose of disolving the scale in the boilers. The quantity used in caustic soda, 5 lbs., and sodium phosphate, 3 lbs, put into the boiler gradually during the twenty-four hours, at a cost of about one dollar per day. The breakage of ccal, going by water has been reduced 25%, owing to improvements on the wharf.

N. C. Sohureman, U. J. Wetherby and Amos Terris have begun to open up their coal seam which is situated on the south side of Joggins R. R., three miles from Maccan Station, and have a slope down 110 feet and are still sinking on a two foot seam of coal, which is very promising in appearance and quality, and further have opened two other seams on same area by trial pits.

The Scotia Mine has 7 men working taking out coal for local sales.

I have the honor to remain,

Yours very faithfully,

WILLIAM MADDEN, Jr.,
Dep. Inspector of Mines.

Date of Official Inspections.

MINE.	Locality.	County.	1896.			1897.								
			Oct.	Nov.	Dec.	Jan.	Feb.	March	April	May	June	July	Aug.	Sept.
Acadia Mines	Westville.	Pictou.	17	21	8	19	26	19	17	13	15	15	4	8
McGregor—Pit	Stellarton.	"	13	18	15	26	25	9	Idle	....	Idle	....	....	....
Third Seam	"	"	15	19	14	22	23	11	15	10	16	14	3	7
Six foot Seam	Thorbourn	"	20	28	23	15	27	16	2	17	18	17	6	....
Drummond Colliery	Westville	"	2	9–11	11	23	22	12	1	11	7	13	2	6
" No. 1	Spring Hill.	Cumberland	6	3	2–25	6	2	5	6	5	2	5	...	16
" No. 2	"	"	6	3	2	5	Idle	5	6	5	1	6	....	....
" No. 3	"	"	7	4	3	5	Idle	4	7	4	1	6	26–27	15
" No. 2	"	"	8	6	4	7	3	6	8	6	3	7	28	17
" No. 3	"	"	8	6	4	7	3	6	8	6	3	7	28	17
Minudie Mine	....	"	Idle	....	....	....	....	....	....	....	....	....	....	....
Smiths' Mine	Maccan.	"	9	8	5	5	4	Idle	9	7	4	8	Idle	....
Scotia Mine	....	"	Idle	8	7	5	....	....	9	Idle	....	....	....	....
Chignecto Mine	....	"	....	8	7	5	....	....	9	Idle	....	....	....	....
Fifteen Mile Stream Gold Mines	....	Halifax	....	....	....	....	....	....	....	....	24–26	....	....	....
Lower Cove Stone Quarries	....	....	....	....	....	....	....	....	....	....	....	8	....	....
Wallace Village Quarries	....	....	....	....	....	....	....	....	....	....	....	9	....	....
Wallace River Quarries	....	....	....	....	....	....	....	....	....	....	....	9	....	....
Bridgeville Iron Mines	....	Pictou.	....	....	....	....	....	....	....	....	....	29	....	11
Eastern Counties Gold Mines	....	....	....	....	....	....	....	....	....	....	....	....	9–23	....
Little Liscomb	....	....	....	....	....	....	....	....	....	....	....	....	....	11
Port Philip Quarries	....	....	....	....	....	....	....	....	....	....	....	....	....	13
Wallace River Copper Mines	....	....	....	....	....	....	....	....	....	....	....	....	....	14
Western Gold Mines	....	....	....	....	....	....	....	....	....	....	....	....	....	20–30

Amount of Air in circulation per minute in the Underground Collieries, as per measurement at each official visit.

MINE.		COUNTY.	1896.			1897.								
			Oct.	Nov.	Dec.	Jan.	Feb.	March.	April.	May.	June.	July.	Aug.	Sept.
Springhill Mines	No. 1.. ..	Cumberland.	43800	44300	47000	30500	32000	40100	30900	22000	25000	23000	22500	23600
	No. 2.. ..	"	60700	59400	60000	62000	Idle.	61500	62300	57800	56900	51000	50700	52700
	No. 3.. ..	"	71000	81000	82000	80400	Idle.	77500	75200	72300	73100	77200	74000	79200
Joggins Mines	No. 2........	"	23500	23700	24300	22100	20000	19700	20100	21000	20000	19700	22100	21900
	No. 3........	"	18000	19700	21200	20000	18100	21100	20000	18000	20100	19700	21200	19100
Minudie Mine...............		"	Idle.	Idle.	Idle.	Idle.	Idle.	Idle.	Idle.	Idle.	Idle.	Idle.	Idle.	Idle.
Chignecto Mine......		"	Idle.	1000	900	750	Idle.	Idle.	Idle.	Idle.	Idle.	Idle.	Idle.	Idle.
Scotia Mine.................		"	900	100	1100	Idle.	Idle.	Idle.	Idle.	Idle.	Idle.	Idle.	Idle.	Idle.
Smith Mine, Maccan.........		"	1000	1200	900	Idle.	1000	800	750	1400	1000	Idle.	Idle.	Idle.
Drummond Colliery	Mines Nos. 1 & 2	Pictou	110000	105100	9600	100000	99700	92400	76500	76700	75200	76400	90700	92000
	" No. 4 ..	" ...	Idle.	Idle.	Idle.	Idle,	Idle.	Idle.	Idle.	Idle.	Idle.	Idle.	Idle.	Idle.
	Scott Pit......	"	Idle.	Idle.	Idle.	Idle.	Idle.	Idle.	Idle.	Idle.	Idle.	Idle.	Idle.	Idle.
Acadia.....................		"	61200	60000	60300	65000	60700	61000	62200	63500	62000	61700	60100	61000
McGregor Pit......		"	99800	120000	110000	126000	110400	12400	Idle.	Idle.	Idle.	Idle.	Idle.	Idle.
Third Seam................		"	63700	62850	61900	71200	70300	63100	67400	64800	63400	60200	63000	67000
Six Foot Seam.............		"	22000	23100	26700	27100	24000	23300	22000	21700	20900	21000	29500	....

ACCIDENTS.

No.	Date.	Mine.	Name.	Occupation.	Remarks.
	1896				
1	Oct. 3	Springhill.	Vincent O'Rouke.	Ba'khead man	Arm broken, caught by full rake on back.
2	" 20	"	Henry Buck.	Pusher in.	Collar bone broken, struck by empty rake.
3	" 28	Albion Mines.	John Smith.	Miner.	Leg broken, fall of coal from face.
4	Nov 13	No. 1, Springhill.	Donald S. Beaton.	Miner.	Rib broken and head cut, fall of coal, working face.
5	"	" "	George Williams.	Loader.	Badly shaken, caught between box and props.
6	Dec. 4	Drummond Colliery.	John Brown	Shiftman.	Squeezed by full box.
	1897.				
7	Jan. 29	Vale Mine.	James A. McLean.	Miner.	Leg broken, full box accidentally left the track and ran back on him.
8	Feb. 4	Drummond Colliery.	Fisher Crockett.	Shiftman.	Leg broken, struck by an empty box.
9	" 12	" "	Samuel Wilson.	Trapper boy.	Arm broken, crushed through a door by a full rake.
10	Mar. 22	Albion Mines.	John Beaton.	Miner.	Hurt by fall of coal from working face.
11	May 29	No. 3, Springhill.	John Burrows.	....	Killed, fall of roof stone on new balance, No. 9.
12	July 2	Joggins Mines.	John McLeod.	Miner.	Hurt, piece of coal from working face.
13	" 6	Albion Mines.	R. McKenzie.	Miner.	Leg broken, fall of coal from working face.
14	" 9	Drummond Colliery.	Joseph Hale, Jr.	Miner.	Foot crushed, fall of top coal, working face.
15	Aug. 4	Joggins Mines.	Henry Butt.	Bankman.	Severely injured, caught between cars and beams of bankhead.
16	Sept 28	Springhill.	Wm. Merritt.	Construct'n boy	Badly injured, fall of rock on main level.
17	"	"	Wm. Cunningham.	Chain Runner	Killed, fall of rock on main level.

Timber and Explosives used from 1st Oct., 1896, to 1st Oct., 1897.

MINE.	PROPS.	BOOMS.	EXPLOSIVES.					
	Feet.	Feet.	Powder lbs.	Flameless Powder lbs	Dynamite, lbs.	Roburite, lbs.	Squibs, doz.	Detonators.
Drummond Colliery	438,629	293,512 Pit Sleepers 9.55 pcs.		308				311
Vale Colliery	35,322	55,168	42,558			25 ft. fuse.	700	
Acadia Colliery	735,000	Props and Brooms inclusive.						
Albion	103,300	61.200		25,000	Fuse ft. 24,700			
Joggins	254,744 Sleepers, 2,453	43,200 Boards, 5,000	4,000		10			

STATEMENT.

Timber used at Springhill Collieries from 1st October, 1896, to 30th September, 1897.

BOOMS :—

22′ × 12″	18′ × 13″	14′ × 10″	14′ × 6″	12′ × 9″ and 10″	10½′ × 9″
4	40	850	19369	1473	3607

PROPS :—

12′ × 5″	10′ × 5″	5½′ × 5″
34836	8344	25541

Pine	2,966	feet
Plank	119,587	"
Boards	88,905	"
Scantling	125,241	"
Spruce Timber	55,223	"
Rollerwood	2,000	"
Hardwood	23,335	"
Pit Pinning	780	doz.
Slabs	990	"
Cap Pieces	34,880	"
Dynamite	400	lbs.

NOTE.—September approximated.

I append here notes of a visit by Mr. Maddin to some of the Cumberland County stone quarries.

I visited Lower Cove quarries, Rufus Hurbert, was manager with 40 men employed. This Company exports most of the large grindstones, or water stones as they are called, manufactured by them to the United States. The stones manufactured by the Company vary in size from 6 inches diameter × 1 inch breadth to 84 inches diameter × 15 inches breadth. Scythe Stones, Holly Stones for use on board ship, and Currier Stones for use in Tanneries, are likewise items in the manufacture at this quarry. All these are manufactured from a blue grit reef 75 feet thick composed of layers from one inch to five feet thick. The quarry is situated about 4 miles from the Joggins Coal Mines on the Cumberland Basin with good shipping facilities.

On July 10th, 1897, visited freestone quarries at Wallace Harbor, operated by the Freestone Company, John Stevenson, manager, with from 10 to 15 men employed. This quarry is composed of gray stone for say about 30 feet down, then a blue belt of about 30 feet thick. It produces a very fine quality of building stone capable of resisting the action of water. They manufacture all sizes of stone varying in weight up to 8 tons, and much larger and heavier stone could be obtained provided they had adequate machinery to handle them.

Another Company known as G. P. Sherman & Co., whose property adjoins that of the last named Company, are working with T. C. Dobson, manager, and employ from 12 to 18 men. New York is their chief market. These two last mentioned quarries are situated about ⅓ of a mile from the shipping pier, at an elevation of from 90 to 100 feet above water level. If these two quarries, in the principle of economy, were operated under one management, and roads laid to the shipping pier, for there is ample descent to run the stone to the pier by gravitation, I think the financial result would be vastly improved, as there is a beautiful harbor with I am informed sufficient water to permit ships of one thousand tons to float. The stone on both quarries is the same in quality and size and has the reputation of being an excellent building material.

Some 4 miles further up the Wallace River which is navigable for that distance at least, are situated the oldest worked quarries probably in the Province, for work was began here in 1809, and is still in active operation, Many of the stones in the Provincial building Halifax were taken from these quarries which are known by the name of the Battye quarries. George Battye is President and Manager, and from 30 to 40 men are employed, the stone is called the Olive stone. On the 10th July when I visited the quarry, stones were lying there dressed, of the following dimensions 3 ft. 6 in. × 3 ft. 6 in. × 10 ft. 6 inches long, there are 32 ft. of this stone in the reef.

Schooners of from 250 to 300 tons can load direct from the quarries, there is likewise a siding from the I. C. R. to the quarry, thus they have excellent facilities for shipment either by water or rail. Much larger stones could be produced if they had machinery capable of handling them. The quarries are situated about one hundred yards from the Short Line Railroad on the bank of the Wallace River.

On September 13th, I visited Port Philip Stone Quarry, McLeod and Embree are the owners, here there is a working face of some 20 ft. producing stone ranging from 4 to 6 × 20 ft. and from 1 to 6 ft. thick and from 4 to 20 ft. long, of a brown color free from iron rust, apparently of a good quality and capable of resisting the action of water and of the weather. This quarry is situated on the side of Port Philip and the stone is taken from there to Pugwash Harbor where they can ship either by water or rail. They are increasing their steam power to facilitate the handling of larger stone and have at present a good pump and engine. This stone ledge has been tested for upwards of ½ a mile or thereabouts or until it passes into lands of Mrs. Costillo, and maintains its quality and quantity, proving very conclusively there is a large amount of this fine stone in this district. Frank Dobson is manager with 33 men employed. They can conveniently handle 500 tons of stone more per day, and intend to enlarge the capability by increasing the power of their plant.

CAPE BRETON COUNTY.

The sales from this county amounted to 1,321,653 tons compared with 1,257,362 tons in 1896. Two Companies furnished the principal amounts, the Dominion and the General Mining Association, which produced respectively 1,252,484 and 267,626 tons, the North Sydney Mining and Transportation Company not being yet in full working order. The sales to Quebec showed a notable increase ; those to other points showed generally a decrease. The remarks made in the last report made by Mr. Neville, Deputy Inspector, on the subject of pillar coal have roused the attention of the Mine Managers and it is anticipated that experiments will shortly be underway to ascertain the readiest method of extracting the greatest possible per centage of coal at the first operation. The gradual extension of pillars over a large area even with a moderate depth of measures is almost certain to bring on a crush, which can with difficulty be stopped.

BRIDGEPORT, Oct. 29th, 1897.

E. GILPIN, JR., ESQ.,
Deputy Commissioner and Inspector of Mines.

DEAR SIR,—I beg leave to forward you a short report of the local mines in the Island of Cape Breton for the year ending September 30th, 1897.

GOWRIE.

Work has been dull at this Colliery during the most part of the year; The bore hole mentioned in my last report which was put down to the dip of the workings has been a suceess, and a Knowles pump has been placed at the bottom of the hole and is now pumping all the water that the pit makes below the upper tide level. Size of pump, Steam cyl, 20″ × 36″. Water cyl, 10″ × 36″. Another Rand Air Compressor has been put on the surface in order to assist the one already there, in supplying power for working the pump. The low levels going East and West have been extended and rooms broken off.

CALEDONIA.

Work has been fairly good at this mine during the greater part of the year. The west levels, No. 4 west deep levels and No. 5 east levels were all continued as usual during the year. Also the east deep was driven eight hundred and fifty feet, and levels turned away east and west at that point. No. 2 east level was extended about four hundred feet, and a Longwall section laid off with two hundred feet face by four hundred and sixteen feet. A barrier of forty feet is left between this section and the level and old workings to the rise. This section is intended to be worked by the Sullivan Longwall Machine. There has been put in an endless haulage system, to be worked by single track, for the purpose of hauling the coal from the Longwall Section.

The four inch air pipe on the east side has been replaced by six inch pipe. On the surface two picking belts and two shaking screens for the purpose of cleaning the coal from brass and splint have been put in and give every satisfaction.

HUB.

The main deeps have been driven to the extreme end of the land area and were then turned on the full dip of the seam to go under the sea. From that point they are now about eight hundred feet out under the sea. The seam is maintaining its regular average dip, and the roof is making less water than under the land, and the coal has improved both in quality and hardness.

Mr. Hudson informed me that the assays from the faces of the deeps gave less ash and sulphur than in any other part of the mine. There is a good barrier of coal being left between the present land area workings and the sea shore.

The old level at the burnt mines was opened and the water run off, and a survey made of the old workings, which has been put on a plan. A new pump has been placed in the deeps for the purpose of pumping to the upper lodgment. Also a new engine was placed at the pit bottom which hauls the coal from the deeps.

On the surface a slack screening apparatus has been added to the plant by which the slack coal can be graded into Nut, Pea, Slack and Duff coal. The management have decided to erect a Fan which is much needed.

STERLING.

No level was hoisted out of this mine during the year. It was decided by the Company to take out the rails, material, pumps, etc., and allow the pit to fill with water. This has been done, but before closing an accurate survey of the faces was made, and timbered where required and the pit left in good order.

INTERNATIONAL.

In this mine levels and headways have been extended in the ordinary course of workings and rooms broken off. The travelling road on the north side of the pit became so bad from horses cutting up the bottom that at last it was considered unsafe and not fit for men to travel therein.

It was brought to the notice of the management to have a new travelling road made. This they have consented to do, and a good new travelling road has been made on the south side of the pit connecting with deep roads, which I hope will give satisfaction.

On the surface a new slack elevator has been erected in connection with the bank head. The slack pockets under the screens are emptied into a tumbling cage, which is hoisted to the top of the bank where screens have been placed and dumped on those, where the Nut, Pea, and Duff are separated and led to their respective cars or pockets.

RESERVE.

On surface a new Chandler Fan 15 feet diameter by 8 feet 9 inch wide, with an engine to drive it has been erected near the old furnace up cast shift. This fan gives about 150,000 cubic feet of air per minute, water gage $1\frac{3}{4}$ in 95 revolutions per minute.

The up cast shaft is found to be rather small, and it is the intention of the management to enlarge it this winter so as better results can be had from the fan which is capable of giving a greater quantity of air.

The smoke stack was built 16 feet higher which makes it in all 67 feet. A new slack elevator was erected to hold and seperate the different grades of coal, also two new picking belts and two shaking screens were put in which work satisfactory Air pipes were laid from the Main slope to the French slope to drive the coal cutting machines on that side, and also to drive the pumps, doing away with steam in the pit.

The endless haulage was extended on the low south level for a distance of 2,800 feet. The main slope deeps were driven 1,000 feet and a landing made on both sides at that point.

The French slope deeps were driven 700 feet. Levels have been continually driven on both sides of the pit during the year. Ventilation is good throughout the pit, which is kept well timbered and I may say in good condition all through.

BRIDGEPORT.

The output at this mine at present is all confined to one road, viz., the South deep which has been driven in all 2,556 feet and intersected the Main slope from the Reserve Mine. Levels and headways have been driven in the ordinary way to win out coal.

It is the intention of the management to open up another district on the north side of the pit this fall, and they are at present driving a set of deeps which are down about 300 feet at date. It is intended to drive them down 1,000 feel below the old water level leading to the shore.

The furnace at this colliery has been abandoned, and the fan that was at the Reserve Mines has been placed at the furnace or up cast shaft, and is giving every satisfaction. The air having increased from 20,000 to 60,000 cubit feet per minute. A Northy pump has been placed at the brook to pump water to the pit a distance of 1,600 feet. 6 inch pipes were laid on the surface, as it was found that the present column of 3 inch diameter were too small. The fire pump that was doing this work has been set up at the pit where it will be in readiness in case of fire. It also pumps water to Dominion No. 1.

DOMINION NO. 1.

The north deeps have been driven 1,600 feet, making a total distance from the pit bottom of 3,600 feet. The south deeps have been driven down 1,500 feet in all from pit bottom 2,500 feet. No. 2 south level has been driven about 2,300 feet, and No. 4 south level about

500 feet. No. 1 north level has been driven this season about 1,500 feet and No. 2 north level about 550 feet.

A travelling road has been driven 600 feet to the rise coming out on the old Bridgeport water level and from thence through the old workings to the surface, making a very convenient way for the workmen to go to and from their work. A large lodgment has been made below the shaft. Two shaking screens and two picking belts have been put up which give great satisfaction in cleaning the coal. A wash house has been built and fitted for the men. One new dwelling for miners has also been built.

VICTORIA.

At this Colliery nothing in the way of improvements have been done. The East Levels have been kept going during the year, and are now about 4000 feet from the pit bottom. From this level the whole output of the Mine is derived.

The west section has been abandoned and the greater portion of the pillars drawn from the rise workings. A good pillar or barrier of coal is left on the high side of the level in order to save it from a crush from the broken strata to the rise. The water discharge pipes from the Northy pump have been replaced by wooden ones, which it is thought will resist the action of the pit water.

CAMPBELLTON.

During last winter the slope was retimbered, and a new travelling road made up to the upper water level leading to the sea shore.

I trust that the management will have this travelling road driven through to the surface. The main deeps have been driven down about 300 feet and levels turned off north and south and rooms won. There has been a remarkable change in the appearance of the coal to the dip. Where there was formerly to the rise about four inches of roof coal or splint above the coal, this has thinned out to about one inch in thickness. Also the seam is found to be quite hard, and in many places through the seam, but especially towards the bottom. Pieces of coal hard and firm resembling Cannel coal are showing from three to eight inches thick. No trace of this has been seen to the rise.

About one fourth of a mile from the pit a branch has been laid off from the main railroad to what is called there the Dolomite Mine. This lead or seam is about 150 feet in width by 250 feet high, apparently all the same quality. There is no telling how far this seam runs back into the mountain, it is said to be the best quality known of the sort.

BROAD COVE MINE.

On the 26th day of August, I visited Broad Cove and found about 50 men employed under the supervision of Mr. Penn Hussy, building a railroad, wharf, breakwater, etc. The breakwater at that date was about 450 feet in length with a double row of piles driven on the inside and the outside cribbed with brush and large stone, some of them would weigh four tons. The top is all floored over skin tight with hardwood logs hewed to six inches thick. The inside is sheathed over also with hardwood plank.

A channel eight feet deep and about 650 feet long was dug out from the pond. To do this a powerful Dredge boat of seventy horse power has been employed and two Scows, one capable of carrying 350 tons, and the other 240, also a Tug boat to row them in and out. A wharf is being built on the eastern side of the pond for shipping. From there to the pit a distance of two miles, a Narrow Gauge railroad has been made.

A seam or level about 13 feet thick is opened and a level driven in about 175 feet. A narrow place driven to the dip about 70 feet and below the level of the brook have proved the coal to be much better. Further up the brook and below this seam is another called the Seven Foot Seam. This seam is opened on both sides of the brook and a level driven in on the west side. This level is in about 400 feet and an airway driven through the crop of the coal to the top of the bank of the brook for ventilation. On the east side of the brook two levels have been driven about 200 feet each, and two rooms opened about 30 feet each, of the upper one the coal looks well in this seam, and all the pit works are well timbered.

SYDNEY MINES.

A set of four Lancashire Boilers of one hundred and fifty horse power each have replaced six of the old fashioned boilers. One Ingersoll Duplex Air Compressor 14½ × 18 has been set up at Princess Pit and a Multitubular Boiler with a circular brick chimney of sixty-nine feet in height has been erected to supply steam for the same.

A new bank Pooley's Weigh Scales has been put up to replace the old one. Fifteen new 6 ton coal cars have been added to the stock, also 6 new workmens houses and one office for the management.

In July the Company started to sink a shaft of 13 feet diameter to the No. 3 seam, which will be reached at the depth of about 500 feet, the sinking plant comprises two Monarch Economic Boilers, one Hoisting Engine, 18½″ × 36″ direct acting, with eight feet drum, one Duplex Rand Compressor, 14″ × 14″ × 22″, one Worlthington Duplex Sinking Pump, one Ingersoll Air Drill and Bar.

During the year the use of naked lights in this colliery has been abolished and Marsaut Safety Lamps of the latest and most approved type have been adopted in their stead. Six hundred of these safety lamps are now in use, a commodious fire-proof lamp house built of brick with concrete floor has been provided at the surface, the lamps are tested and gauges cleaned by compressed air.

In the pit the main deeps north and south have been extended 800 feet and 900 feet resectively. A new travelling road of 3,000 feet has been made on the north side in No. 2 district. The self acting incline of 2,200 feet in No. 2 district south is giving good satisfaction· Another air winch has been placed in No. 2 district north a distance of 1 mile from the pit bottom. A good change is being made in regard to the horse stables, they are being moved from the pit bottom down into the workings a distance of about 4,500 feet on each side of the pit, the one on the north side is now completed and holding 30 horses.

The drinking water for these horses is brought from the reservoir on the surface to these stables through 1 inch wrought iron pipe taken down the shaft. On these pipes at certain distances are placed cocks from which water can be taken to sprinkle the roads when dry and dusty.

NORTH SYDNEY MINING AND TRANSPORTATION CO., LIMITED.

A larger and more substantial wharf has been built to replace the former which was partly destroyed by the heavy seas. A 40 horse power semi-portable engine and boiler have been put up between the wharf and the level mouth, with a house erected over boiler and engine. Also a bank has been erected with screens to separate the large coal from the slack.

The engine hauls the coal from the level to the top of this bank, where it is dumped into the screens. The levels have been driven through the summer and are now about 950 feet from the entrance.

An airway was driven to the rise to a shaft which acts as an up cast. There is no fan or furnace at this mine yet.

I am yours most obedient,

J. NEVILLE,

Deputy Inspector of Mines.

Accidents in Cape Breton Mines year ending September 30th, 1897.

DATE.	MINE.	NAME.	AGE.	OCCUPATION.	REMARKS.
Oct. 15, 1896.	Bridgeport	Angus McNeil	23	Miner	Two ribs broken, caught between loaded box and roof.
Dec. 5, "	Dominion No. 1.	John J. McNeil	26	Loader	Hurt by piece of coal falling on him from junk.
Jan. 4. 1897.	Victoria	Peter McDougall	19	Loader	Killed on balance, run over by Cuddy.
March 5, "	"	James McLellan	62	Miner	Killed by fall of coal from pillar.
April 9, "	Dominion No. 1.	William Spencer	22	Shot firer	Fatally burned by compressed powder ignited from spark of lamp.
April 9, "	" "	Angus Gillis	32	Shot firer	Burned on hands and face from the above explosion.
May 5, "	Reserve	John Lund	40	Miner	Fatally injured, caught between coal box and pillar.
May 25, "	Sydney	James Burrows	40	Miner	Burned on back of head and injured by blast going off almost immediately after the fuse was lighted.

May 10, 1897.	Caledonia	Angus McIntyre	23	Loader	Arm broke, caught between coal box and prop.
June 10, “	Hub	John McDonald	30	Miner	Burned on face and hands from ignition of compressed powder.
June 10, “	“	Donald McLain	36	Miner	Burned slightly from above explosion by spark off lamp.
July 6, “	Reserve	Edward McDonald	35	Shot firer	Burned by compressed powder ignited by spark off lamp.
July 6, “	“	Joseph Gardner	28	Shift Man	Burned by the above mentioned explosion.
July 6, “	“	Dougald Menzie	20	Shift Man	Burned by the above mentioned explosion.
July 9, “	Dominion No. 1.	David Hall	49	Shot firer	Burned by compressed powder ignited whilst stirring shot.
July 20, “	Sydney	Hugh Dickson	49	Miner	Rib broke by fall of stone from roof.
July 20, “	“	William Harvey	40	Miner	Leg broke by fall of coal from face.
Aug. 3, “	‘	James McPherson	39	Miner	Fatally injured by piece of coal falling on him whilst hauling.
Aug. 16, “	Dominion No. 1.	Robert Cuddy	28	Loader	Hurt on head by piece of coal falling on him from junk.

Amount of Cubic Feet of Air Per Minute Circulating through Cape Breton Mines during the Year ending September 30th, 1897.

MINES.	Oct.	Nov.	Dec.	Jan.	Feb.	March.	April.	May.	June.	July.	Aug.	Sept.
Caledonia	92000	92310	96100	91750	83100	89150	79600	67960	67900	69260	80000	81421
Bridgeport	32000	32550	30000	25000	19700	12900	11810	20000	19500	61360	66000	60100
Reserve	42000	48700	40000	50100	47880	48200	47909	40000	119200	129000	135000	145500
Hub	22100	27960	25000	29210	29870	21510	16900	20600	21500	20540	18540	27000
Sydney	78000	84989	86556	85322	92129	77080	77760	77837	75783	88740	79325	82500
Dominion No. 1	70600	71000	67250	69200	59850	60000	61000	73080	58200	57800	59300	58600
International	86600	70000	67250	78200	70000	50000	42000	58097	68000	70000	70600	78900
Gowrie	30000	30000	29800	27600	39900	21000	30100	30000	37100	26920	28200	29800
Victoria	58000	50000	60010	59500	57900	59806	57780	59700	58000	67040	59200	60100
Campbellton	9000	9200	7890	8900	......	7000	7210	7960	8745	6970	9970	10000
N. Sydney Transportation Co.	......	5200	6000	......	......	......	......	......	5000	6400	7000	6980
Broad Cove	......	......	......	......	......	......	......	......	......	......	3960	......

Dates of Visits Inspecting Mines Year ending September 30th, 1897.

MINES.	Oct.	Nov.	Dec.	Jan.	Feb.	March.	April.	May.	June.	July.	Aug.	Sept.
Caledonia	5	17	21	15	15	9	16	11	24	13	19	3
Bridgeport	15	4	2	18	6	16	6	6	10	2	9	4
Reserve	19	16	15	19	4	11	5	5	17	6	17	23
Hub	21	10	10	16	3	8	10	10	14	7	4	6
Sydney	24	7	12	21	10	15	21	21	12	10	7	11
Dominion, No. 1	26	18	3	27	17	29	17	17	9	20	16	8
International	27	3	14	20	19	25	4	4	23	12	18	9
Gowrie	28	13	10	26	16	19	31	31	16	14	20	7
Victoria	29	12	22	4	2	6	27	27	25	15	21	15
Campbellton	31	21	19	23	13	13	29	26	17	17	23	18
N. Sydney Transportation Co.	......	28	11	......	......	......	......	......	......	30	6	14
Broad Cove	......	......	......	......	......	......	......	......	......	......	26	......

MISCELLANEOUS.

During the past year prospecting work was done with a diamond drill on areas at Black Brook owned by Messrs. Murray, Harold, et al. It is reported that some discoveries of value were made.

Mr. Moseley continued his explorations, and in the fall his work was visited by Mr. Fletcher of the Canadian Geological Survey. He found that in addition to the roof coal at the outcrop, somewhat erroded and broken, some twelve inches in thickness, there were five feet six inches of coal of uniform quality. This coal as opened near Cochran's Lake is not far from the line of extension of the limited outcrop of the Tracey seam at the head of Cow Bay Some authorities contend that it is the equivalent of the Mullins seams. At present little definite can be said on this point beyond the fact that the explorations of Mr. Moseley have shows a valuable coal bearing horison many thousands of feet below the so-called productive strata. This subject was more fully referred to by the author in a paper on the Undeveloped Coal Fields of Nova Scotia read before the Nova Scotia Institute of Science. From the work done it would appear that this seam of Mr. Moseley's will add many millions to the present available coal tonnage of the Sydney district. The following analysis was furnished by Mr. Moseley:

Volatile Matter	38·45
Fixed Carbon	55·80
Ash	5·75
	100·00

In Victoria County the Messrs. Burchell continued working. They report that the coal improves in quality to the dip, and that there are other valuable seams on their areas. A report on their operations will be found in Mr. Neville's memo. of collieries inspected by him during the past season.

At Mabou a few tons of coal were mined and sold locally. At Broad Cove Mr. Hussey has continued to develop his property energetically. The breakwater has been strengthened and the channel into McIsaac's Pond so far completed as to allow of the shipment of coal. It is intended to deepen and widen the channel so that steamers of a large draught can enter. The position of this harbor should give its freights an advantage for points in the Gulf of St. Lawrence, etc.

GOLD.

The returns for the year ended Sept. 30th, show that 26,579 oz. 19 dwts. 21 grains were extracted as compared with 26,112 oz. 10 dwts. 22 grains, (page 61 report 1896). There are a few returns not yet received which will bring the total up to about 28,000 ounces. The difficulty, referred to last year, in getting prompt returns from those engaged in gold mining still continues.

The following general summary shows the yield by districts:

GOLD.—General Statement for the year ended September 30th, 1897.

DISTRICT.	No. of Mines.	Days' Labor.	Mills.	Tons Crushed.	Average Yield of Gold per ton.			Total Yield of Gold.		
					Oz.	Dwts,	Gr.	Oz.	Dwts.	Gr.
Wine Harbor	1	1293	1	611	....	10	9	318	3	2
Gold River	2	829	2	287	1	17	20	542	19	5
Fifteen Mile Stream	1	17533	2	9158	....	6	5	2856	18	....
Stormont	3	43486	4	28700	....	....	13	6209	18	10
Brookfield	1	18664	1	8076	....	5	7	3366	10	....
Caribou and Moose River	5	25404	4	9324	....	5	23	2781	13	19
Uniacke, South and Mount	4	4985	4	2344	....	19	9	2274	4	4
Cochran Hill, Goldenville and Crow's Nest, (Sherbrooke)	5	561110	6	12659	....	6	13	4181	18	19
Waverley	1	5231	1	806	....	13	7	461	8	....
Cow Bay	1	....	1	717	....	15	15	560	19	19
Tangier	1	4060	1	372	....	16	2	299	14	....
Central Rawdon	1	13731	1	963	....	4	3	199	12	....
Killag	1	228	1	112	3	10	8	393	19	....
Montague	2	7696	3	956	1	....	6	1177	1	7
Oldham	......	....	1	308	....	18	17	282	5	6
Leipsigate	2	3451	2	167	....	7	8	82	7	....
Unproclaimed and others	3	4554	.....	929	....	13	15	625	18	2
Total	34	207255	37	76559	....	....	....	26595	6	21

NOTE.—Additional returns bring the total amount of Gold produced during the year to 26,963 oz. 14 dwt. 2 gr.

I append the report of Mr. Maddin who visited a number of the gold mines last summer.

WESTVILLE, N. S., 1st Dec., 1897.

E. GILPIN, ESQ.,

Dep. Commissioner and Inspector of Mines:—

DEAR SIR,—I have the honor to submit to you the following report on the gold mines of the Counties of Guysborough, Halifax, Queens, Lunenburg and Hants.

On June 24th to 26th I visited *15 Mile Gold Stream District* and found the Egerton Gold Mining Company working, with G. F. McNaughton as manager, and Lauchlan McLean, underground manager, with 40 men employed. The deepest shaft is 260 feet deep and situated near the eastern end of the belt which is 14 ft. thick, of milling ore. There is also a shaft west of this on the Nonpareil belt, 16 ft. of milling ore, and the north belt which has 15 ft. of milling ore. Those three belts are connected by tunnels driven across the strata. The walls or ribs between the belts cause considerable trouble to keep them safe, as the measures or strata of which they are composed are very much broken, and full of joints. These walls are only from 21 to 15 ft. thick, and the angle or dip is some 75° to 85°.

The management are leaving pillars of ore 25 × 20 ft. to strengthen the mine, and as the ore belt is from 14 to 16 ft. thick they drive a place through the pillar 8 × 8 ft. leaving the remainder of belt as a support or leg to the wall. Without mentioning other small belts or lodes that have been cut on the property I am of opinion that there is exposed to view here the largest body of milling ore that I have seen in the Province. The mine is in very good condition and very free from accidents during the past year. The mill employed has 30 stamps, and is lighted by electric lights. Since my visit last year 3 or 4 large frame houses have been erected for tenements. Isaac McNaughton and 3 associates are doing some prospecting in this district. Improvements appear in almost everything excepting the main road, the only means of access, which with the exception of a couple of miles next to the mine is in a very bad condition.

It is likely that the shaft sunk on the Nonpareil belt may be made the principal working shaft, as the manager talks of sinking it deeper, and as the strata between the ore belts is only some 12 to 16 feet thick, he thinks of carrying on all his work by means of the shafts. The probabilities are in favor of another large belt near by, as the anticlinal is quite visible, but instead of forming a N. and S. dip the fold has gone over and all the belts are dipping north so that it appears reasonable to conclude that the corresponding belt to the Nonpareil will in all likelihood be south, because there are 3 belts and no south dip, which causes me to think that the 4th belt will be in close proximity; there being a complete fold on the strata, the hanging wall of the one belt forming the foot wall of the other. The Nonpareil belt has been proved for some 200 ft. in depth.

GUYSBOROUGH COUNTY.

Isaac's Harbor. On August 10th, 1897, I visited the mine of the Richardson Gold Mining Company at Gold Brook. A. B. Cox, manager, and William Welsh. underground manager, 65 men employed. The shaft on the south side is down 195 ft. and on the north side 125 ft. The Belt is 10 ft. thick and is worked from north to south, around the apex. They are now raising a place on the east side to send up the ore, so that when it is finished there will then be 3 shafts for taking ore out. The Belt is worked from south to west 300 ft., and from north to west 200 ft. The circle around from face to face is 1300 or 1400 ft, but there is on the west side some ground not yet opened up, some of which may probably be barren, as it is possible the belt may be cut off on the west side. There are two pumps, one on the north side and one in the south shaft. Steam drills have been put in since my visit last year. Pillars are left in for support as on account of the size of the belt it is found necessary to have something more than the ordinary timber to keep the mine safe. I see very little difference in the mine from last year, excepting as they descend the operations become more extensive. The mine appears to be in good condition.

In the *North Star Mine* no work is being done at present. South of the North Star, George Johnston and Freeman Hudson have a property comprised of 19 areas all in one block, in which are two belts, one 4 ft and the other 5 ft thick, both of which exhibit gold; also a small lead two inches thick which is very rich. There are several other leads not sufficiently opened as yet to permit me to say much about them.

East of the North Star lead is what is called the Burke lead, 3 inches thick. James McLellan with some others have it leased and are at work upon it, and are down 216 ft. on an angle of 16°. Only four men were employed here at the time of my visit.

On August 11th, 1897, I visited the mine of *The Country Harbor Gold Mining Co., Limited*, but it was idle.

Hopewell Mining Co., Country Harbor. J. C. Mason is manager at the mine with 18 men employed. West of the big belt, which is 10 ft. thick, there are now known to be at least five belts or leads, varying in size from 18 inches to 7 ft. thick. The old shaft has been pumped out to a depth of 40 or 50 ft. and a level driven west through 7 ft. of whin to the 5 ft. belt, on which they intend to sink and to drive west cutting the other belts and leads. Across the gulch there are two shafts sunk on a lead west of the old mine, one of which on the north end is down 40 ft. and the other on the south end is down 30 ft. Those two shafts cut two leads, one 4 inches thick on the foot wall and the other 6 inches thick on the hanging wall, these two leads are tunnelled south 85 ft. an l north 20 ft. The work done is well timbered and appears in good condition.

Country Harbor. David McQuarrie has four men at work on the Cook and Johnston property, north of the Stellarton Mine, and has 18 inches of crushing belt. He is down 75 ft. and has drifted some 95 ft. east and west. This place is looking up again.

Forrest Hill District. The McConnell Mining Co., The Phœnix Gold Mining Company, David Archibald, manager, Michael Daly, underground manager. Here 20 men are employed. The level is 13 inches thick, with two shafts sunk on it. The one at the east end is down 50 ft and the one at the west end 40 ft. The distance stopped east is 22 ft. and west 154 ft. connecting the two shafts underground. This is a fine looking lead with solid walls and the mine is well timbered. On the Ophir belt which is 3 ft. thick some work has been done, as well also as on the Camp lead which is four inches thick. There have been several other leads cut on this property, and preparations are now being made for the erection of a mill. An office and 3 dwellings have been built. The prospects here are promising.

Forrest Hill District, Modstock Gold Mining Co., W. J. McIntosh, manager, Frank Tumey, underground manager, 60 men employed. On the Salmon River lead, which is 2 inches thick, there are 5 shafts, varying in depth from 35 to 85 ft., and 600 feet of stopping. This lead has been proved for 1400 ft., of which 600 ft. is worked and 800 feet tested by sinking trial pits. Also on the Ophir lead which has 10 inches milling ore, there are 5 shafts varying in depth from 80 to 135 ft., and 888 ft. stopped. On the Mill lead which is two inches thick there are two shafts, one 140 ft. deep and the other 60 ft. not much work has been done on it as yet. The Barrel lead lies 200 ft. north of the Mill lead, and considerable work has been done on it on the surface, the greatest depth being 12 ft. in the rock. Several leads lying between the Mill lead and Barrel lead have been stripped. Then again south of the Ophir lead is another lead 13 inches thick known as the new lead in which there are 3 shafts; the one on the west end is 100 ft. deep, and that on the east end 70 ft. These shafts are all well timbered and 75 ft. of tunnel has been driven east and west. Then 200 ft. further east there is another shaft sunk to the rock and timbered. No work is being done on this lead at present but the manager intends starting this month. The mill house has been remodelled and a new 35 horse power engine and a new force pump obtained. The engine and pump were supplied by I. Matheson & Co. of New Glasgow, N. S. The mill has been remodelled and new stamps set in. This Company has 650 acres of beautiful wood lands. The road into the mines is in good condition, although outside the roads are very bad for some 6 miles. This is a comparatively new mining camp but a snug little chapel and school house have been built, with 3 or 4 good sized stores and 25 or 30 dwelling houses.

Crow's Nest Mine, Aug. 13th, 1897, W. H. Weston, manager, H. Dimock, underground manager. 27 men employed last year. The bulk of the work done in this mine was on the Stake lead. This year the work is on a 7 ft. belt of milling ore. They are sinking to connect with the Hardman tunnel, which is 50 ft. below the present tunnel, and when the connections are made all the ore from the present tunnel will be run down a shoot from the present tunnel to the Hardman tunnel and thence to the mill. The mine is in good shape for working on a large scale. The management are erecting a new mill house with 20 stamps, also a large dwelling house, and an Ingersoll Air Compressor capable of running 3 drills, and are likewise putting in a Dodge Rock Breaker, also two 60 horse power boilers and have ordered a compound engine from I. Matheson & Co., who supply them with engines and boilers, and they intend erecting a one hundred light dynamo to light mill, boarding house, tramway and several portions of the mine. When these improvements are completed this will be one of the leading mines in Guysboro County. The point at which the sinking is being done is 240 ft. inside the new tunnel. On the west side some 20 ft. from tunnel they have driven some 200 ft. on the belt which is from 10 to 15 ft. thick. Since my last visit there have been 2 large belts cut in this tunnel and a 2 ft. lead. The mine is in good condition.

Cochrane Hill Mining Co. Aug. 13th, 1897. Mr. H. E. Taylor manager, and Donaldson, underground manager, 20 men employed. When I was there the mine was idle on account of lack of water supply for mill and steam purposes. The Mitchell belt is now opened up and they are taking 20 ft. of it out. This belt is some 80 ft. thick, composed of slate and quartz mixed through each other. South of the Mitchell belt there is another 6 ft. belt and between these two belts is a 2 ft. lead opened up. All the work in this district is on the north dip. There is a fine mill-house with 20 stamps, a good compressor capable of running 3 or 4 drills, also a good engine and boilers.

Barassois Gold Mining Co., Wine Harbor. August 14th, 1897. Martin Shaugnessey, manager, E. Conroy, underground manager, 20 men employed. There are 3 shafts on the Romkey lead which is 10 inches thick. The east shaft is down 200 ft., and the west 215 ft. The management is making preparations to start work on what is called the Twin leads. This is the third manager in the last three years. In this mine the ladders are in bad condition, but the manager has promised to repair them at once. There are 300 ft. stoped east of the east slope and 250 ft. west of the west slope. The shafts are connected making some 750 ft. of workings in length. The mine is well timbered and ventilated.

Napier Gold Mining Co. H. T. Harding, manager, Andrew Gillis, underground manager, 14 men employed. They are working west on the slate belt, which is 5 ft. thick. The east end is full of water. This mine has been idle for some time. The water is now only out of the west end, but they are pumping and as the belt is giving good returns they intend to take all the water out and work east and west. At the time of my visit they were working only some 50 ft. down.

Goldenville. Aug. 16th, 1897. At Mitchell's Lake there is some prospecting going on. I did not visit this mine as I did not know where they were working.

Bluenose Gold Mining Co. A. G. McNaughton, manager, Gardiner McKenzie, underground manager, 60 men employed. There is a shaft sunk 200 ft. deep on the south belt, which is 8 ft. thick and stoped 500 ft. There is likewise a shaft sunk 200 ft. on the Springfield belt which is 5 ft. thick and stoped 500 ft. The Springfield is sloped east 200 ft. and west 300 ft. from shaft. There is another shaft 75 ft. deep, and distant 1050 ft. west from the west shaft. They are driving a level east on the Springfield belt. Then there is the Coburg lead, 20 inches thick with a shaft down 200 ft. and stoped east 200 ft. and west 100 ft. This is on the north dip and at an angle of 35°. There is a new mill house with 20 stamps running. The mill engine is 45 horse power. There is a new office well furnished and a new trestle, 1200 ft. long. This is for carrying the ore from the various pits to the mill house. There is also an air compressor which runs two drills. The hoisting engine is 40 horse power. The management are now preparing to put in larger air compressors and will run more drills in the near future. There are other belts and leads opened up and ready for work. There are good travelling roads in these mines and they appear perfectly safe.

The New Glasgow Gold Mining Co., J. A. Fraser, manager, Edward Williams, underground manager, 45 men employed. The north lead, on which they are still sinking is now worked to a depth of 135 ft. and proves better as they descend.

In former years the lead has been worked east and west, and the present work is connected with the old working. Above the 100 ft. slope there is a belt with 35 ft. of milling ore on which nothing is being done at present. They are now sinking on the Canada lead which is 6 inches thick and intend sinking 125 ft. and to tunnel or drive levels and work back over hand stopping. There is also a shaft being sunk on a belt some 14 ft. thick. The Striker lead is idle. This is all the work at this mine at present. The mine is well timbered with good ladder ways.

George Hirschfield, manager, having 20 men employed, are working on the old North lead which was worked some 20 odd years ago. No information could be obtained as to how far it was worked east and west as it was worked through several properties. They have got a lot of gold out of this old mine. They pumped the water down some 90 ft. and in the hanging wall there was a lead with from 3 to 4 ft. of whin between it and the old north lead. They are taking out the old scaffolds and placing new ones across the whole belt. There are two shafts now opened, one of which is 90 ft. deep and the other about 50 ft. On the south belt, which is 5 ft. thick, there is a shaft down 90 ft. This belt has likewise been worked through several properties This is a very rough looking mine, and the ladderways are not in as good a condition as they should be, but the management stated that they had many difficulties to overcome, and were then making necessary repairs on the shaft and ladders.

The Sutherland Development Co., George Brackett, manager, J. H. McDonald, underground manager, 15 men employed. There is a shaft sunk 60 ft. on the Brazen Serpent lead which is 8 inches thick. The management are erecting a new mill. On the John R. belt which is 3½ ft. thick of crushing ore, there are 4 shafts sunk with depths as follows:—No. 1 to the east, 50 ft., Nos. 2 and 3, 90 ft., No. 4, 55 ft. Another shaft is being sunk on the state lead which is 8 inches thick. A cross tunnel, 45 ft. long, connects Nos. 1 and 2 shafts on John R. lead north. On the Murray lead which is 20 inches thick a shaft is now being sunk and will connect with the tunnel. The tunnel will connect several belts and leads, the working of which will be carried on by means of the one shaft close by the new mill which has 10 stamps now in running order. Engine, 25 H.-P. Boiler, 30 H.-P. There is not much work done here yet; they are only making preparations. Things look very well around the mine, and the shafts are well timbered.

Salmon River, Dares Hill District, Aug. 17th, 1897. I find that the old Hattie property is being developed. The property is situated on the west side of Eagle Lake, a beautiful sheet of water, and the mine is now called the Lake Eagle Mine. On elevated ground 21 ft. above the level of the lake is the mill house containing boiler, engine and pumping gear, also a battery of 5 stamps.

The mill is built over the main shaft of the Hattie or Slate lead, a vein of between 2 and 3 inches thick yielding from 1½ to 3 oz. per ton. On this vein are 3 shafts from 30 to 50 ft. in depth. About 70 ft. to the north is an 8 ft. lead of solid quartz opened and well timbered all ready for operation and showing well. Those leads are the continuation of the famous Dufferin. Also to the north about 600 ft. and west 1000 ft. from the mill is a 2 ft. belt showing well. A large part of this property has not been prospected. The surrounding country is well supplied with hard wood and other timber suitable for mining purposes. This district enjoys many natural facilities for mining. At the time of my visit I learned from John Perry, who has charge of the Dufferin mine, that the water was out of Nos. 3 and 5 shafts and they were running the pumps to the full extent of their power to get the balance of the mine pumped out and expect to have it in working order in a short time. This is another property that has not been thoroughly prospected. Although a large quantity of gold has been obtained here it was all taken out of a very small area. The property is well wooded. The power for carrying on the mining operations here is water power obtained from the Salmon River near by. The power could be increased to a very much greater capacity if required.

Killag Mine, Halifax Co., Aug. 18th, 1897. A. J. Cox, manager, William Farnell, underground manager, 18 men employed. On a lead called the Flat Lead, which is 6 inches thick and laying at an angle of 30°, there is a shaft down 70 ft. They are still sinking and stopping east. There is some 60 ft. stoped on the east side; the west side remains solid. They are pumping out the old shaft and intend working the Stuart lead which is 10 inches thick. There is not much work being done here but the mine is in good condition. Robert Hall and others who have a large block of areas on the north dip of this district are prospecting the property. They have cut 3 leads, which I saw, all bearing minerals. They have some very fine drift quartz obtained on the property and are working with the hope of striking this lead. This is another district which is not prospected beyond a few small trial pits and a few trenches.

Beaver Dam has been idle since last March.

Caribou District, Guffey Jennings Gold Mining Co., Aug. 20th, 1897. L. W. Getchell, manager, R. L. Schurman, underground manager, 12 men employed. They are now sinking a new shaft which is to be 4 ft. 6 in. × 9 ft. inside of timber. This shaft is to go down 500 ft. which will bring it on a level with the present workings. The present working is a shaft 130 ft. deep then a slant down some 800 ft. at an angle of 36°. The new shaft will go down 75 ft. south of this slant and a tunnel will be driven through the belts, thus testing this much of the property to the depth of 500 ft. The shaft will be in three apartments, one for pump; the two for cages will be 4 ft. 6 in. each and the place for pumps 1 ft. The manager intends to work this belt in lifts of probably 100 ft. by sinking and tunnelling through to the pay streak, sections suitable in this way as pillars will be left in to support the old work above. The mine is idle and will probably remain idle until the shaft is down. The water is kept pumped out and the mine looks very well. The belt is from 14 ft. to 15 ft. thick, two-thirds of which is milled. There is a new air compressor now in running order, and air drills are used in the sinking of the new shaft. This property is well equipped with new mill houses and mill, and good boilers and engines. Still it is a very slow and expensive way to get this belt out. The new shaft will concentrate all the work to one point and the ore will be much more cheaply handled than in the old way. There is an air of cleanliness about the engine house and mill here that we do not often see around gold mines. Everything is kept clean and appears to run without a hitch.

Caribou District, Elk Mining Co., Aug. 20th, 1897. F. Prince, manager, Michael J. Murphy, underground manager, 18 men employed, depth of shaft. 100 ft. From shaft bottom there is a slant driven 300 ft. at an angle of 45°, on a belt from 3 to 8 ft. thick, one-third of which is milling ore. This belt is very much disturbed with some bad breaks, which cause bad walls and require great care on the part of the management whose reputation is more or less at stake in case of accidents. They have left a small pillar in as a support and intend leaving more in for the same purpose. Although the mine is well timbered the belt is very irregular and wet, and the scaffolds are not filled with rock as most of the belt goes up the mine and leaving pillars in wide belts is the safest course to follow. I could see the mine was in fair condition and provided pillars be left as support I see no reason for danger, otherwise they may meet trouble.

The Dickson Mine, Aug. 20th, 1897. W. J. Davison, manager, Augustus Lawlor, underground manager, 10 men employed. The water has been permitted to rise in this mine to within 90 ft. of the surface. They are now taking out some lead at the south end of the mine. This is a good safe mine, and has always been well timbered, and the scaffolds well filled with rock. Not much work is being done at the present time, but the mine looks very well.

Moose River District, Aug. 21st, 1897. John Emmett and S. Smith have some areas east of the Touquoy property, on which George Cameron and four other men are prospecting, and have opened up one belt 3 ft. thick and one 14 inches thick, and are making preparations to erect a mill.

The Touquoy Gold Mining Co., John Reynolds, manager, Wm. Reynolds, underground manager, 32 men employed. Working on the Britannia belt which is 7 ft. thick. This is where they are now getting gold so plentifully. It is an old belt opened some time ago and has had very little attention paid to it. Recently the manager drew attention to it again and it has turned out a bonanza. It is down 30 ft. and stoped 20 ft. east and 20 ft. west. They are also working on the little north lead in which there is 20 inches of milling ore. The workings in this lead are down 170 ft. with three shafts on it. They have stoped east 80 ft. and west 420 ft. There is a break in this lead dipping west and since then they have stoped west under this break. The mine showed indications of caving in and they decided to leave a pillar in near the bottom, and have likewise put in a lot of new timber. They are now cleaning up the dump, and running it down the mine on the new scaffolds they put in at the bottom, and I think it has stopped the caving in. It is the manager's idea to leave pillars along this break as they proceed west. He has had some trouble but, I think, is through with it now. The mine looks all right now and I think he has made it quite safe.

Andrew McGregor has 7 men working on the Montreal property on the east side of the road between Emmetts and the Tourquoy property on a large belt. At time of my visit it was down 30 ft. and was 15 ft. thick, getting thicker as they went down on it.

Also J. K. Pearson has 8 men working on Donald Archibald's property one mile west of the Touquoy property and has cut a trench 600 ft. across the belts and has opened up 14 leads and 5 belts; the belts varying in thickness from 3 to 9 ft. and the leads from 3 inches to 1 foot. It is Mr. Pearson's opinion that this is the continuation of the Touquoy property as one or two of the leads are similar to the leads worked on the Touquoy district. The shaft is all well timbered and he is now taking tests out of it. His work is nicely situated on high ground and has the appearance of some day being *the* mine of Moose River.

Little Liscombe Gold Mine, Sept. 10th, 1897. John Power, manager, A. P. McQuarrie, late of Montague, in charge of the mill. 9 men are employed working on the Cow lead which is 4 ft thick with from 2½ to 3 inches of quartz on the foot wall and the same on the hanging wall and whin between. They were also working the slate lead which is about 4½ ft. thick with about 8 inches of quartz on the hanging wall and a few inches of slate, the rest, whin; and are now making arrangements to work part of the big quartz lead which is from 30 to 40 ft. thick. There has been very little work done at this mine since my last visit. The deepest shaft is but 60 ft. The work done is fairly well timbered.

HANTS COUNTY.

South Uniacke Gold Mine, Sept. 21st, 1897. The J. J. Withrow Mining Co., Mr. Leedham, manager, George Brown, underground manager, 57 men employed. Hoisting engine, 45 horse power, mill engine, 40 horse power, 2 boilers, one 60 horse power, and one 50 horse power, 10 stamp mills. 4 shafts down from 100 ft. to 225 ft. deep and stoped some 900 ft. east and west. These 4 shafts are sunk on the lead known as the Slate lead which is 6 inches thick. There are two steam drills in use and since my last visit a new management has taken charge. I spoke in last year's report of some careless work. Now I am pleased to state that the manager has good large timber set in, and has removed the stone which had been put on bank and had it sent down the mine and filled up all the open ground, thus making the mine safe. The mine now is in very good condition except the travelling way in which there is no mid-wall between it and the hoist. The hoist pump and travelling way are all in one space, but the manager was making preparations to put in a mid-wall between hoist and travelling way for the safety of the men in travelling up and down the shaft.

The Gold Lode Mining Co., A. A. Howard, manager. This mine is idle, but the mill was employed doing some custom work in the way of crushing dump pickings which in several mining camps seem to be turning out a very profitable investment to those who are fortunate enough to own any.

In the Quirk and Thompson mine not much work is being done just now. Five men are employed prospecting on the property and were so engaged at the time of my visit opening up a lead in a slate belt. The mill was running on some tests. The mill engine 10 horse power and there are 5 stamps in the mill. The hoisting engine is 10 horse power also.

The Mount Uniacke Gold Mines are also idle at present, excepting 3 or 4 men doing some work on the old Prince property.

Northup Gold Mining Co., Rawdon, Sept. 22nd, 1897, E. N. Dimock, agent, E. C. Puttner, manager, 28 men employed working on a belt which averages 4 ft. thick. The shaft is 405 ft. deep. There are 5 shafts on this belt all connected underground. This belt is taken out by sinking 60 or 80 ft. then they drive in on the belt say about 500 ft. then raise to the opening above and work back to the shaft, leaving pillars at certain intervals for support to the shaft, thus working the belt out in lifts of from 60 to 80 ft. All the ground between the lifts is well scaffolded and filled at each lift. A part of the ore from one lift is dropped down through chutes to the lift below. All the ore is taken to the lower lift and thence sent to the bank. All the bottom portion of this mine appears in good condition, and travelling ways are in good order, and the mine well ventilated.

A tunnel is being driven on the Central Rawdon property slanting at the north east side of the hill on a course expected to strike the main lead on the hill about 160 ft. south of mill, and is in now about 450 ft., but no leads or belts of any importance have been cut yet. This work is situated on high ground and a tunnel will, as well as testing the property, be one of the cheapest means of mining the ores above its level. There are in use at the mine one 60 horse power Matheson Tubular Boiler, one 40 horse power engine, one Northey steam-pump for supplying water to the mill and boilers, two 5 stamp H. A. Hayward's improved batteries complete, with plates, one 4 ft. corrugated frue fanner, Fraser and Chalmer's, two 6 ft. plain frue fanners, Fraser and Chalmers, all in good running order. The mill is self-feeding. The ore is taken from the shaft to the mill on a trestle about 520 ft. long. I might further add this mine is beautifully situated in a good farming locality which considerably enhances the value of the property at least in appearance, and makes it one of the best looking mines in the Province.

QUEENS COUNTY.

Sept. 24th, 1897. *Whiteburn Mining Camp* is idle at present. George Gammon and Gordon Smith are, however, running the Whiteburn mill on dump pickings. They worked the mine up to 3 weeks ago.

The Crocker mill, Brown mill, and the Rossignol mill are idle. It is however, expected from prevalent rumors that operations will again be resumed very shortly in them. They are all well equipped with necessary working plant.

MALAGA LAKE.

R. R. McLeod has 29 men employed working the Parker-Douglas property on a new lead, called the McLeod lead, 5 inches thick, and in whin. I am informed this is the only lead in the mining camp so situated. The shaft is down some 40 ft. and they have stoped some 50 ft.; this lead has hitherto averaged 5 oz. to the ton. Mr. McLeod has decided to test this across the property. He has 4 men working tribute on the same property, to the south on a 4 inch lead, called the James Roland. They are down 40 ft. and stoped 60 ft. There is a steam hoist erected at the McLeod lead and a bank engine and boiler house is under construction.

Logan Ball and 16 men are working on the twin lead and have 4 shafts from 60 to 100 ft. deep, connected underground. In one of those shafts, B. Murchie was killed by the tub falling down the shaft and killing him. He was attending at the bottom of the shaft filling the tubs and hooking them on; in some way, it appears, the hook was not properly placed and slipped, letting the tub go down the pit with the sad result as stated. The twin lead is as follows:—3 inches on hanging wall with 3½ ft. of whin between, making a working belt of some 4 ft. thick. There is about 300 ft. of the lead stoped. The mine itself is well timbered, but the travelling-ways are bad and the men have promised to make them safe immediately.

Sydney Aldred and 7 men are at work on a 2½ inch lead north of the twin lead, and have 2 shafts, 25 and 50 ft. deep. The walls are good and fairly well timbered. The Parker Douglas mill, Minneapolis mill and McGregor mill are idle. There is nothing doing except what is superintended by R. R. McLeod. Some 60 men are employed in this camp, but unless something unexpected occurs, a very much larger number will shortly be employed.

North Brookfield Mines. Wm. L. Libby, Manager, Noble Crow, underground manager, 80 men employed. The shaft is 375 ft. deep, of which 135 ft. is perpendicular, at 60 ft. down the shaft, there is an off-set, 45 ft. long on an angle of 45°. The ore is hoisted in a skip, which is carried on wheels running between 2 pieces of deal, 4 × 6 inches. This skip is constructed to empty itself, and can be sent at will down the main shaft or turned off north on the angle lead by shifting a switch attached to a lever on top. From the 135 ft. point, the skip travels at an angle of 35° for 224 ft., which is as far as it can be taken at present. They are now down 700 ft. and still going deeper. This slope is used for taking timber down and makes a grand air-way. The ore that is taken out of the sinking is raised to the bottom of the skip road, and emptied into a larger bin capable of holding 20 tons, and runs from this bin into the skip by raising a lever. The most of the work is on the west side of the pit. There are 3 lifts above where the sinking ore is put: No. 1 is 400 ft., No. 2, 413 ft., and No. 3, 445 ft., and from 50 to 60 ft. apart and connected in at the above mentioned distances and over-stoped. There is a level tunnel off the slope and in 85 ft. on the west side. On east side of shaft a level is driven some 60 ft. The belt varies greatly in thickness. They are milling about 1000 tons per month. The mine is double shifted and works day and night. They have a chlorination plant capable of treating 1000 tons per month. The mill has 20 stamps. Engine, 90 horse power. The hoisting engine is 30 horse power, Truro Foundry Co., makers. There are two 60 horse power boilers. This mine is in fine condition, yet some pillars of ore should be left in as the belt is in some places 12 ft. thick and, although well timbered, it may be driven a considerable distance further, and the pillars would make doubly sure and could be obtained when coming back.

The Philadelphia Mining Co. Charles McClure, manager, S. Carrol, underground manager, 30 men employed. This mine has been idle for most part of the year, but it is now pumped dry and the travelling ways are remodelled and repaired. The shaft which makes a good hoisting and travelling way has been repaired. Considerable expense has been incurred putting this mine in good order, and it now looks well and safe. The lead which is 18 inches thick shows well in gold. There is a 20 stamp mill, 50 horse power engine, 30 horse power hoisting engine, 25 horse power pumping engine, 2 boilers, 45 horse power and 50 horse respectively. There are 3 shafts, one of which is 180 ft. and the others 200 ft. deep, connected underground for a distance of 300 ft. east and west, I anticipate good results from this mine.

John Thornham, I was informed, has taken charge of an old mine at Pleasant River, but was not properly under way.

I visited a new mine in *Stanbourn* settlement, east some 5 miles from New Germany station in the N. S. Central R. R., owned by

G. N. Dimock, James Woodworth and F. C. Mosher, all of Windsor. There is a 5 stamp mill in running order, and three shafts from 18 to 24 ft. deep, on a lead 9 inches thick, bound in whin, and called the little Klondyke. There are quite a number of leads here, and it is an easy place to prospect, as the surface is shallow. There are 16 men employed and they are sanguine of good results. This new mine is in a place that is well wooded, and a large river called the North River is distant only half a mile, power from which could be made available to carry on extensive mining operations.

LUNENBURG COUNTY.

Block House Mine. I found A. A. Hiseler with 6 men on the Prest lead or Fisher lead which runs nearly north and south. At the place opened by Mr. Hiseler it is about quarter of a mile further north than the place at which W. H. Prest did considerable work. Mr. Hiseler has sunk a shaft 46 ft. and the lead is 3 ft. of quartz, he has up a bank house and small office.

Godfrey Smith has 4 men prospecting between Prest's old work and Hiseler's new shaft on the same lead, this is all that is doing at Block House at present.

The Gold River Gold Mine. I. N. Baker, manager, and John Wheeler, underground manager, 7 men employed working on the west end of the North Star lead. This Belt has 3 leads, namely, on the foot wall, 8 inches, on the hanging wall 3½ inches, and in the middle of the Belt, 4 inches. This Belt is about 5 ft. thick and some 16 inches of lead in it. There are 4 shafts, all connected underground, varying from 50 to 80 ft. deep. Some work is being done on another lead further south. There is a 2 stamp mill, and the leads show very rich in gold.

G. J. Hiseler has 5 men working on his property north of the Abraham Lincoln Gold Mining Co., and has opened a belt 8 ft. thick with 3 ft. of quartz in it beside stringers in the slate. He has also opened two others, one 18 inches thick and the other 7 inches, and all give very good indications.

The Victor Mine Mill, the old Jumbow Mine Mill and the Abraham Lincoln Mine Mill are idle. However, T. N. Baker and G. J. Hiseler are opening up very promising properties, and from appearances I would conclude that this mining camp will soon come up again.

MONTAGUE.

Hayward Mine. The main shaft on the Lawson or Belt lead is now about 340 ft. deep. The last 110 feet of this has been sunk since Sept., 1896. Besides this work, a drift, 200 ft. long, has been driven easterly at the 200 ft. level ; and at the bottom level drifts 50 ft. long have been driven both easterly and westerly. The drift at the 200 ft. level reaches the break the lead being found again 40 ft. to the north. A large fissure lead runs north and south at this point.

On the Skerry lead in the southern part of the block five prospecting shafts have been sunk by tributors, consuming about 200 days' work. To the east of the main shaft on the Nugget lead there is a shaft (already 50 ft. deep) being sunk to an additional depth of 80 ft. A shaft house and engine house, now under construction, are nearing completion.

At this mine they have four rock drills (Rand), three of which are in operation.

Oland Property, (Symonds-Kaye). On the Skerry lead to the east of the old mill two shafts have been sunk, the first one 60 ft. deep and the east one 50 ft. deep. These are joined by a drift about 25 ft. long.

Salisbury Property. Tributors have sunk a shaft on the middle block, and are still working there, making it pay fairly well.

On the west block of this property prospecting has been done during the last few months to the extent of about 60 days' work. According to Mr. Logan one small lead has been cut, showing gold, but not containing enough to warrant further work on it.

IRON MINING

PICTOU COUNTY.

Pictou Charcoal Iron Mining Co., Bridgeville, W. B. Moore, manager, Thos. Williams, underground manager, 26 men employed underground, 5 overground. I travelled all the new works. There is a slope down 98 ft. at an angle of 45°, and a lead turned off south now in some 90 ft. in good ore 11 ft. thick. There is a place being driven up to the old workings and they made connections at the time of my visit. This makes a good return for air as it is over 100 ft. higher than the mouth of the slope. In this place the ore is 8 ft. thick, they are also driving north and are in 165 ft. in ore 6¾ ft. thick. This is all new work, well timbered and ventilated. It was in the south level of this mine, 45 ft. from the bottom, that Evan Sutherland received injuries from a fall of clay from the roof that caused his death. They were averaging an output of 60 tons per day when I was there, but this could be increased to 100 tons per day if required. This is all the work this Company is doing at present.

The Brook and Road tunnels are both idle.

All of which is respectfully submitted.

I have the honor to remain,

Yours very respectfully,

WM. MADDIN, Jr.
Dep. Inspector of Mines.

MISCELLANEOUS.

Quicksilver.—An interesting occurrence of this metal was reported from a small piece of ground forming the division between the First and Second Dartmouth Lakes. This ground is partly destroyed glacial moraine, the surface of which for a few feet in depth has been weathered into a sandy loam with boulders of slate and quartzite. All through this surface the quicksilver occurs in globules. No attempt has yet been made to follow the metal to its source, beyond a shallow pit revealing the comparatively unaltered moraine a few feet below the surface.

Lead Ore.—The Cheticamp district in Northern Inverness in the fall of 1896 was boomed as an alluvial gold producer along the course of the Little or Cheticamp River. Gold is undoubtedly present in all the streams of the district, but as yet no systematic testing or work has been done. The work of the gold prospectors has, however, disclosed a deposit which may prove very valuable. In prospecting the L'Abime Brook a deposit of galena ore of large size was found.

This has been opened by the Cheticamp Gold Mining Company. The property so far as developed promises to be very valuable. The face value of the openings are stated to be 20 per cent. galena and 3 per cent. copper. The ore is said to carry on an average one ounce of silver for every unit of lead, and gold in places up to 14 dwts. per ton. There is no doubt that the district extending northerly from Cheticamp towards Mackenzie River is well worth the attention of prospectors in the vicinity of the dykes which traverse it.

Copper.—During the past season a good deal of interest was taken in the search for deposit of copper ore in Cumberland and Colchester Counties. These ores are very widely spread, and in several places the reports show evidence of good value. The ores contain frequently small amounts of gold and silver, and in one instance quicksilver. It is expected that these explorations will be resumed next summer. I give the following note of a visit paid by Mr. Maddin, Dep. Inspector, to the work done in the vicinity of Wentworth Station :

On September, 14th, 1897, I visited the copper mine on Wallace River about 3 miles from Wentworth Station, owned by E. R. Betts and H. D. Pierce. This property has good indications of copper, but no new work has been done on it for some time. Then 6 miles further to the north east on what is called the Chisholm property, and on the same river, a shaft was sunk which at the time of my visit was nearly full of water. The water became too heavy to discharge without the aid of pumps, and a tunnel has been driven from the banks of the Wallace River some 60 ft. in toward the shaft. E. R. Betts, who take much interest in this and other properties, says the shaft is well timbered. The exposures on the bank are red sandstone. The shaft is in clay, and only struck the rock when the water stopped them. I observed some very good copper ore, which Mr. Betts informed me was taken from the shaft. Mr. Albert J. Hoskins and Mr. S. K. Page, with others, are interested in these areas, but were then away obtaining pumps and machinery for the purpose of developing this property. At a point further north east and one mile east from Wallace Station, in a railway cut running through red sandstone, copper ore is exposed, and on nearly the same course on the north shore, I am informed, very good copper ore has recently been found. I regret very much the above mentioned works were idle at the time I was there but I anticipate hearing that work is resumed at an early date.

IRON ORE AND OTHER MINERALS.

During the past year the Londonderry Iron Company mined very little ore. The Torbrook mine remained idle.

The Nova Scotia Steel Company worked at Bridgeville and drew some ore from the Charcoal Company. They have imported largely from Bell Island, Newfoundland, with a corresponding diminution in the amount mined in Nova Scotia. It is stated that the Bridgeville Charcoal Iron Company are arranging for the manufacture of ferromanganese. The manganese ore to be supplied from New Brunswick. Some prospecting was done on the Whycogomah iron deposits, the results showing that the deposits contain very large amounts of iron ore, of good quality close to shipping. Owing to the increasing cost of ores on the European continent suitable for the Bessemer process there is an undoubted future in iron ores on tide water in the Lower Provinces which are of good grade.

Manganese. The exports of this mineral during the year were small. It has been stated that a new deposit of good grade and unusual extent was recently opened and samples shipped.

Barytes. A mine of this mineral has been operated to some extent by the Messrs. Henderson & Potts on the east side of Lake Ainslie. The vein is from five to nine feet in thickness and has been traced several hundred feet.

The above is respectfully submitted by

Your obedient servant,

E. GILPIN, Jr.
Inspector of Mines.

TABLES.

LIST OF MINERAL LEASES (OTHER THAN GOLD.)

IRON.

No. of Lease.	Name of Owner.	County.	Agent or Manager.	Address.	No. of Sq. Miles.
36, 93	Moseley, E T	Cape Breton			2
145	McLean, Jno	"			1
91	Brookman, P.	"			1
92	Matheson, D	"			1
102	Smith, W.	"			1
103	McKenzie, H. R	"			1
104	McKenzie, J. W	"			1
43, 44, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59	Bartlett, J. H	Pictou			15
60, 68, 70, 71	Nova Scotia Steel Co	"			4
61, 67	Cameron, J. A	"			2
1	McIntosh, J. C	"			1
2	McDonald, L	Antigonish			1
92	McAloney, J	Cumberland			1
5	McDougald, J	Antigonish			1
10	Fraser, W. J	Inverness.			1
1, 2	Nova Scotia Steel Co.	Guysboro			2
22, 82	McMillan, J. R	Inverness			2
					37

	COPPER.				
145	McLean, J	Cape Breton			1
142	LeCras, H	"			1
126	Matheson, A	"			1
116	Greener, J	"			1
95, 106	Eastern, Dev Co	"			2
105, 181	Burchell, J. E	"			2
94	McKenzie, D	"			1
2	Grant, J. A	Antigonish			1
3	Francklyn, G. E	"			1
4	McInnis, Hugh	"			1
7	Nichols, T	Victoria			1
6	Hardman, J. E	"			1
5	Cove, J. W	Colchester			1
135	McKenzie, R	Cape Breton			½
					15½
	LEAD.				
143	Cape Breton Silver Mining Co	Cape Breton			1
2, 3	Fraser, C. F	Colchester			2
					3
	COAL.				
83, 84, 85	Barton, A. McG	Pictou			3
$\frac{1}{23}$, $\frac{2}{42}$, 3, 4, 62, 63, 64, 69	Acadia Coal Co	"	H. S. Poole	Stellarton	18
5/12, 6/13, 9/14	Intercolonial Coal Co	"	C. Fergie	"	3
8/6	Nova Scotia Steel Co	"			1
			Carried	*forward*	25

LIST OF MINERAL LEASES (OTHER THAN GOLD.)—*Continued.*

COAL.

No. of Lease.	Name of Owner.	County.	Agent or Manager.	Address.	No. of Sq. Miles.
				Br't forward.	25
10/24	Richey, M. H.	Pictou			1
11/11, 45, 10	Gray, B. G.	"			4
66/46	Fergie, C.	"			1
46, 83	Nova Scotia Steel Co.	"			2
					33
56, 22/51, 74, 95, 96, 97, 98, 99, 100, 101, 102, 103, 104, 14	Canada Coals & R'y. Co.	Cumberland			15
55, $\frac{16}{6}$, $\frac{17}{7}$, $\frac{18}{8}$, $\frac{20}{52}$, $\frac{21}{55}$, 61, 62, 70, 71, 72, 73, 75, 76, 77, 78, 79, 81, 82, 83, 84, 85, 87, 88, 90, 177, 108, 109, 110, 111, 112, 113, 114, 115, 116, 117, 118, 119, 120, 121, 122, 123, 124	Cumberland Rail'y & Coal Co.	"	J. R. Cowans.	Springhill	48
8/5	Lawson Mining Co.	"			1
6/12	Londonderry Iron Co.	"			1
15	Prospect Mining Co.	"			
9/22, $\frac{10}{23}$, $\frac{11}{28}$, $\frac{12}{29}$, $\frac{13}{30}$	Styles Mining Co.	"			5
23/53	Binney, J. W.	"			1
24/47, 25/49	Boston Coal Mining Co.	"			2
57	Salt Springs Coal Co.	"			1

26/16	Minudie M. & T. Co.	Cumberland			1
58, 59, 60, 61	Tupper, C. H.	"			4
63, 93, 105	Leckie, R. G.	"			3
65	Annand, C.	"			1
66, 67, 68, 69	Cowans, J. R.	"			4
80	Gue, T. R.	"			1
86	Rutherford, J.	"			1
91	Fraser, H. R.	"			1
89	Hickman, J. S.	"			1
94, 107	Weatherbe, U. T.	"			2
94	Hayward, A. A.	"			1
106	Vroom, W. E.	"			1
107	Fitzsimmons, R.	"			1
					96
13/79, 1/27, 2, 3, 28, 29, 30	General Mining Association	Cape Breton	R. H. Brown	Sydney Mines	23
37/78, 58/67	Weatherbe, R. L.	"			2
42/52, 49/53	McLeod, Hugh	"			2
207, 45/5, 46/28, 47/29, 50/40, 51/41, 52/42, 60/54, 61/55, 62/56, 63/57, 64/58, 65/59, 66/60, 67/61, 68/62, 69/63, 108, 109, 110, 125, 137, 162, 188	Dominion Coal Co.	"	H. Donkin	Glace Bay	94
117	Hamilton, A. G.	"			1
142	LeCras, Henry	"			1
111	Greener, Jno.	"			1
214	Cayley, H. St. Q.	"			1
			Carried	forward.	125

LIST OF MINERAL LEASES (OTHER THAN GOLD.)—*Continued.*

COAL.—*(Continued.)*

No. of Lease.	Name of Owner.	County.	Agent or Manager.	Address.	No. of Sq. Miles.
				Br't forward.	125
179, 180, 164, 168, 190, 208	Roberts, F	Cape Breton			6
112, 113, 114, 115, 118, 42	Cowans, R	〃			6
130	Fairbanks, E. C	〃			1
128, 129, 134, 135, 136, 139, 144	Moseley, E T	〃			7
138, 149, 184, 203	White, A. J	〃			4
141, 177, 140	Cumberland Ry. & Coal Co.	〃			3
146	Tremaine, B. E	〃			1
159, 160	Morrison, A G	〃			2
166	Dunn, J	〃			1
161	Routledge, E	〃			1
169, 170, 183	McKay, Jas	〃			3
178	Routledge, W	〃			1
165	Stephens, L. H	〃			1
163, 185	Hamilton, C. F	〃			2
199, 193, 194, 176	Copeland, J. D	〃			4
171, 174, 212	Goreham, J. W	〃			3
181, 211	Burchell, J. E	〃			2
0	McKinnon, D. L	〃			1

209, 206, 186, 187, 202, 205	Kennelly, D. J	Cape Breton			6
210	Harold, T. C.	"			1
196	Routledge, T	"			1
201	Hickey, C	"			1
204	Morrison, M	"			1
0	McCuish, A	"			1
192	McKenzie, J. A	"			1
198	McKenzie, Jas. A	"			1
175	McDonald, J. W	"			1
182, 200	Cossitt, G. G	"			2
167	Murray, J	"			1
189	Morrison, J	"			1
191	Tremaine, L. E	"			1
195	McDonald, A. J	"			1
197	McVicar, J	"			1
					195
1/2	Burchell Bros	Victoria	J. T. Burchell.	N. Campbl't'n	3
1/13	McGregor, J. D	Inverness			3
2/6	Ross, H. E	"			1
6/4, 7/10	Shannon, S. L	"			1
8, 9, 10	Fraser, J. W	"			3
11	Dawson, G	"			1
19, 20	Smythe, J. J	"			2
12, 13, 14, 15	Broad Cove Coal Co	"	W. P. Hussey.	Broad Cove	4
26	McKenzie, J. W	"	"	"	1
16	Drummond, R	"	"	"	1
			Carried	*forward.*	20

LIST OF MINERAL LEASES (OTHER THAN GOLD.)—*Continued.*

COAL.—(*Continued.*)

No. of Lease.	Name of Owner.	County.	Agent or Manager.	Address.	No. of Sq. Miles.
				Br't. forward.	20
0	McNab, W	Inverness	W. P. Hussey.	Broad Cove	1
24	Hussey, W. P	"	"	"	1
16	Jones, A. C	"	"	"	1
23, 25, 28	McColl, J	"	"	"	3
27, 3/11	Boston and N S. Coal Co.	"	"	"	2
31	Tupper, M	"	"	"	1
29, 30	Tremaine, E. D	"	"	"	2
35	Ross, W	"	"	"	1
32, 33, 34	Wallace, W. V	"	"	"	3
					35
1, 7, 8	Terminal, City Co.	Richmond	"	"	3
2	Columbia Coal Co	"	"	"	1
3	Reynolds, W. K	"	"	"	1
5	Chisholm, W.	"	"	"	1
4, 6, 9	Lennoxville T. & C. Co	"	"	"	3
0	Catherine, Jos	"	"	"	1
					10
1	McMillen, T. C	Colchester	"	"	1

TABLE A.—COAL TRADE BY COUNTIES, FOR THE YEAR ENDING SEPTEMBER 30TH, 1897.

	CUMBERLAND.		PICTOU.		CAPE BRETON.		OTHER COUNTIES.		TOTAL.	
	Raised.	Sold.	Raised.	Sold.	Raised.	Sold.	Raised.	Sold.	Raised.	Sold.
1st Quarter........	118,462	106,089	94,656	82,973	341,086	306,101	4,324	3,837	558,528	499,000
2nd "	77,336	68,568	93,121	76,783	144,880	84,433	1,272	452	316,609	230,236
3rd "	108,849	90,524	83,149	72,768	401,290	332,586	4,910	4,090	598,198	499,968
4th "	88,326	74,039	115,942	107,710	637,663	598,533	5,650	3,935	847,581	784,217
Total.........	392,973	339,220	386,868	340,234	1,524,919	1,321,653	16,156	12,314	2,320,916	2,013,421

TABLE B.—COAL TRADE BY COUNTIES, FOR THE YEAR ENDING SEPTEMBER 30TH, 1897.

	CUMBERLAND.		PICTOU.		CAPE BRETON.		OTHER COUNTIES.		GRAND TOTAL.
	Round.	Slack.	Round.	Slack.	Round.	Slack.	Round.	Slack.	
NOVA SCOTIA:									
Land Sales	35,446	55,728	120,837	84,394	14,900	12,662	641	......	324,608
Sea Born	......	......	34,073	9,781	202,633	71,024	6,561	......	316,700
Total	35,446	55,728	154,910	94,175	217,533	83,686	7,202	......	641,308
New Brunswick	142,099	41,649	5,503	1,434	34,428	9,394	164	......	242,043
Newfoundland	......	......	......	103	72,851	2,792	244	......	75,990
P. E. Island	......	......	17,178	20,793	8,229	15,315	517	......	62,032
Quebec	42,515	9,592	40,638	5,500	701,724	71,878	4,027	......	875,874
West Indies	......	5,227	......	......	4,001	128	......	......	9,356
United States	......	6,964	......	......	74,709	24,446	660	......	106,279
Other Countries	......	......	......	......	539	......	......	......	539
Total	220,060	119,160	218,229	122,005	1,114,014	207,639	12,314	......	2,013,421

COAL.—Sales.

Names.	1st. Quarter.	2nd Quarter.	3rd Quarter.	4th Quarter.	Year 1897.	Year 1896
Nova Scotia :						
Land Sales.	90,444	91,003	69,221	73,940	324,608	359,396
Sea Borne..	115,897	26,949	70,102	103,752	316,700	307,007
Total N. S..	206,341	117,952	139,323	177,692	641,308	666,403
New Brunswick.	65,808	54,442	59,296	62,497	242,043	252,293
Newfoundland. .	35,025	3,847	10,775	26,343	75,990	94,236
P. E. Island....	19,304	......	14 927	27,801	62,032	63,000
Quebec	130,722	28,829	242,483	473,840	875,874	795,060
West Indies....	9,264	......	92	......	9,356	1,222
United States ..	31,997	25,166	33,072	16,044	106,279	174,919
Other Countries.	539	......	......	......	539	....
Total......	499,000	230,236	499,968	784,217	2,013,421	2,047,133

COAL.—General Statement.

1897.	Produce.	Sales.	Colliery Consumption.
1st Quarter......................	558,528	499,000	55,801
2nd "	316,609	230,236	48,677
3rd "	598,198	499,968	44,919
4th "	847,581	784,217	38,421
Total..........	2,320,916	2,013,421	187,818

Statement, showing the quantities of Nova Scotia Coal delivered by water to the St. Lawrence ports during the season of navigation just closed, together with the quantities of coal received from other sources.
(Can. Min. Review.)

	MONTREAL.		SOREL.		THREE RIVERS.		QUEBEC.		TOTALS.		EACH FIELD.	
	1896.	1897.	1896.	1897.	1896.	1897.	1896.	1897.	1896.	1897.	1896.	1897.
CAPE BRETON :												
General Mining Association........	74,610	78,435	8,808	8,793	2,144	2,416	33,473	30,740	119,035	120,384		
Dominion Coal Co................	485,804	576,339	9,053	7,535	5,571	6,542	47,345	80,092	547,773	670,508		
Cape Breton Colliery.............	4,750	3,378	....	....	....	....	1,330	....	6,080	3,378		
Total..................	565,164	658,152	17,861	16,328	7,715	8,958	82,148	110,832	672,888	794,270	672,888	794,270
PICTOU COUNTY :												
Intercolonial Coal Co....	33,569	40,587	... .	....	....	....	....	3,762	33,569	44,349	33,569	44,349
FOREIGN :												
Scotch, English, Welsh & American.	67,434	69,917	....	4,550	....	....	18,933	8,377	86,367	82,844	86,367	82,844
	666,167	768,656	17,861	20,878	7,715	8,958	101,081	122,971	792,824	921,463	792,824	921,463

The returns for previous ten years were :—1895, 724,948 ; 1894, 796,282 ; 1893, 737,891 ; 1892, 626,087 ; 1891, 602,323 ; 1890, 543,656 ; 1889, 467,525 ; 1888, 517,539 : 1887, 482,103 ; 1886, 377,500 ; 1885, 360.000.

COAL PRODUCE OF NOVA SCOTIA FOR YEAR ENDED SEPTEMBER 30, 1897.

COLLIERY.	Produce.	SALES.		Total Sales.	COLLIERY CONSUMPTION.	
		Round.	Slack.		Engines.	Workmen.
Joggins	73,357	59,488	13,049	72,537	4,034	1,440
Jubilee	40	40	....	40	....	....
Scotia	1,280	799	255	1,054	....	112
Springhill	318,296	159,733	105,856	265,589	26,117	5,990
Acadia	213,050	119,689	60,193	179,882	24,771	5,016
Intercolonial	173,818	105,361	54,991	160,352	9,097	3,579
Dominion Coal	1,252,484	917,625	169.120	1,086,745	53,526	20,196
Sydney	267,626	192,310	37,539	229,849	18,377	12,709
North Sydney	4,809	4,079	980	5,059	8	93
Broad Cove	799	402	....	402	7	11
Mabou	289	289	....	289	....	....
New Campbellton	15,068	11,623	....	11,623	2,345	390
	2,320,916	1,571,438	441,983	2,013,421	138,282	49,536

Statement of number and classes of men employed at each Mine, &c., during the Year ended Sept. 30, 1897.

		UNDERGROUND.				ABOVE GROUND.				CONSTRUCTION.				TOTAL		HORSES.		Pits worked.
		Skilled Labor.	Labo'rs.	Boys.	Days' Labor.	Skilled Labor.	Labo'rs.	Boys.	Days' Labor.	Skilled Labor	Labo'rs.	Boys.	Days' Labor.	Persons.	Days' Labor.	Above.	Below.	Days App.
	Joggins	84	50	18	32,805	5	4	6	14,193	....	..	..	......	167	46,998	4	5	272
	Jubilee	5	.....	....	138	....	....	....	....	4	..	..	94	9	232	2	....	26
	Springhill	350	247	54	135,320	81	141	27	551,532	5	..	..	350	905	187,202	15	6	306
	Acadia	230	202	62	112,480	60	124	35	59,800	....	..	..	......	713	172,280	15	22	241
	Intercolonial	151	74	70	71,870	39	55	19	32,206	3	3	.	919	414	104,995	11	9	249
Dom. Coal Co.	Dominion, No. 1	44	200	16	65,917	26	22	2	15,739	1	..	..	......	311	81,656	2	16	271
	Victoria	90	80	27	47,157	9	54	10	20,706	....	.	..	......	270	67,863	4	14	188
	Gowrie	90	12	17	12,903	19	27	9	11,972	....	..	..	......	174	24,875	2	5	89
	Caledonia	164	90	34	79,206	20	47	6	22,476	....	..	..	......	361	101,682	9	40	252
	International	111	23	23	32,994	17	21	9	12,682	....	..	..	......	204	45,676	5	19	128
	Old Bridgeport	82	34	19	42,646	10	11	4	8,691	....	.	..	......	160	51,337	2	19	177
	Hub	150	20	26	36,393	30	33	4	16,180	....	..	..	......	263	52,573	9	18	151
	Reserve	187	56	40	88,035	27	51	4	25,967	....	..	..	......	365	114,002	13	27	222
	North Sydney Mining Co.	8	2	....	1,503	1	4	....	740	2	2	..	199	19	2,442	2	....	112
	Sydney Mines	371	61	99	141,854	70	96	43	58,360	6	3	1	3,126	750	203,340	11	65	272
	Cape Breton, Victoria Co.	24	23	1	11,050	83	5	2	2,979	....	..	..	......	58	14,029	2	1	198
	Broad Cove, Inverness Co.	3	2	...	2,423	....	9	....	1,789	2	16	..	4,322	32	8,534	12	....	300
		2,144	1,176	506	914,694	417	704	180	356,012	23	24	1	9,010	5175	1,279,716	120	266	

COAL.

NOVA SCOTIA EXPORTED TO THE UNITED STATES.

Years.	Tons.	Duty.	Years.	Tons.	Duty.
1850	118,173	24 ad.	1873	264,760	75
1851	116,274	"	1874	138,336	"
1852	87,542	"	1875	89,746	"
1853	120,764	"	1876	71,634	"
1854	139.125	Free.	1877	118,216	"
1855	103,222	"	1878	88,495	"
1856	126,152	"	1879	51,641	"
1857	123,335	"	1880	123,423	"
1858	186,743	"	1881	113,728	"
1859	122,720	"	1882	99,302	"
1860	149,289	"	1883	102,755	"
1861	204,457	"	1884	64,515	"
1862	192,612	"	1885	34,483	"
1863	282,775	"	1886	66,003	"
1864	347,594	"	1887	73,892	"
1865	465,194	"	1888	30,198	"
1866	404,252	"	1889	29,986	"
1867	338,492	$1.25	1890	50,854	"
1868	228,132	"	1891	25,431	"
1869	257,485	"	1892	13,883	"
1870	168,180	"	*1893	16,099	"
1871	165,431	"	†1894	79,837	40
1872	154,092	75	‡1895	73,097	"
			1896	174,919	"
			1897	106,279	"

NOTE.—The quantities given for the years 1852 to 1872 are on the authority of the Board of Trade, Philadelphia, and are probably under-estimated.

*Nine months only.

†NOTE.—After August 1st, 1894, duty on Round Coal 40 cents, on Culm or Slack, 15 cents.

‡Fiscal year begins October 1st, and ends September 30th. (Cap. 4, Acts 1893.)

Nova Scotia Coal Sales, 1785 to 1897 (Inclusive.)

Year.	Sales.	Total.	Year.	Sales.	Total.
1785	1,668		1841	148,298	Forw d 1,208,150
1786	2,000		1842	129,708	
1787	10,681		1843	105,161	
1788			.1844	108,482	
1789			1845	150,674	
1790		14,439	1846	147,506	
1791	2,670		1847	201,650	
1792	2,143		1848	187,643	
1793	1,926		1849	174,592	
1794	4,405		1850	180,084	1,533,798
1795	5,320		1851	153,499	
1796	5,249		1852	188,076	
1797	6,039		1853	217,416	
1798	5,948		1854	234.812	
1799	8,947		1855	238,215	
1800	8,401	51,048	1856	253,492	
1801	5,775		1857	294,198	
1802	7,769		1858	226,725	
1803	6,601		1859	270.293	
1804	5.976		1860	322,593	2,399,319
1805	10,130		1861	326,429	
1806	4,938		1862	395.637	
1807	5,119		1863	429.351	
1808	6,616		1864	576,935	
1809	8,919		1865	635,586	
1810	8,609	70,442	1866	558.520	
1811	8,516		1867	471,185	
1812	9,570		1868	453,624	
1813	9,744		1869	511,795	
1814	9,866		1870	568,277	4,927,339
1815	9,336		1871	596,418	
1816	8,619		1872	785,914	
1817	9,284		1873	811,106	
1818	7,920		1874	749,127	
1819	8,692		1875	706,795	
1820	9,980	91,527	1876	634,207	
1821	11,388		1877	697,665	
1822	7,512		1878	693,511	
1823	27,000		1879	688,628	
1824			1880	954,659	7,317,430
1825			8881	1,035,014	
1826	12,600		1882	1.250,179	
1827	12,149		1883	1,297,523	
1828	20,967		1884	1,261,650	
1829	21,935		1885	1,254.510	
1830	27,269	140,820	1886	1,373,666	
1831	37,170		1887	1,519,684	
1832	50,369		1888	1.576.692	
1833	64,743		1889	1,755,107	
1834	50,813		1890	1,786,111	13,910,136
1835	56,434		1891	1,849,945	1,849,945
1836	107,593		1892	1,752,934	1,752,934
1837	118,942		*1893	1,485,924	1,485,924
1838	106,730		†1894	2 019,742	2 019.742
1839	145,962		1895	1,831.357	1,831.357
1840	101,198	839,954	1896	2,047,133	2.047,133
			1897	2,013,421	2,013,421
				Total..................	$44,296,628

SUMMARY.

1785 to 1790	14,349	1841 to 1850	1,533,798
1791 to 1800	51,048	1851 to 1860	2,399,319
1801 to 1810	70,452	1861 to 1870	4,927,339
1811 to 1820	91,527	1871 to 1880	7,317,430
1821 to 1830	140,820	1881 to 1890	13,910,136
1831 to 1840	839,954		

*Nine months only. Fiscal year begins Oct. 1, and ends Sep. 30. (Cap. 4, Acts 1893).

GOLD.

GENERAL ANNUAL STATEMENT.

YEAR.	Total Ounces of Gold Extracted.			Stuff Crushed.	Total Days' Labor.
	Oz.	Dwts.	Grs.		
1862	7275	0	0	6473	156,000
1863	14001	14	17	17002	273,264
1864	20022	18	13	21434	252,720
1865	25454	4	8	24423	212,966
1866	25204	13	2	32162	211,796
1867	27314	11	11	31386	218,894
1868	20541	6	10	32262	241,462
1869	17868	0	19	35147	210,938
1870	19866	5	5	30829	173,680
1871	19227	7	4	30791	162,922
1872	13094	17	6	17093	112,476
1873	11852	7	19	17708	93,570
1874	9140	13	9	13844	77,246
1875	11208	14	19	14810	91,698
1876	12038	13	18	15490	111,304
1877	16882	6	1	17369	123,565
1878	12577	1	22	17990	110,422
1879	13801	8	10	15936	92,002
1880	13234	0	4	14037	103,826
1881	10756	13	2	15556	126,308
1882	14107	3	20	12081	106,884
1883	15446	9	23	25954	97,733
1884	16059	18	17	25147	118 087
1885	22202	12	20	28890	157,421
1886	23362	5	13	29010	128,880
1887	21211	17	18	22280	173,448
1888	22407	3	10	36178	163,772
1889	26155	6	13	39160	211,548
1890	24358	9	9	42749	160,164
1891	23391	..	..	35212	149,381
1892	21080	3	18	33633	120,761
1893*	14030	5	7	28040	97,471
1894	14980	7	13	39333	139,140
1895	22112	17	21	58082	159,564
1896	25596	14	6	65873	180,519
1897	26579	19	21	76559	207,255
Total .	654446	8	14	1029923	5,529,057

*Nine months only.

MONTHLY STATEMENT FROM EACH GOLD DISTRICT.

MONTH.	Cow Bay.							Sherbrooke.						
	No. of Mines.	Days' Labor.	No. of Men.	Tons Crushed.	Yield of Gold.			No. of Mines.	Days' Labor.	No. of Men.	Tons Crushed.	Yield of Gold.		
					Oz.	Dwts.	Gr.					Oz.	Dwts.	Gr.
October	1	......	....	6	..	1	6	3	3122	124	691	291	..	..
November	1	......	....	30	27	10	..	4	3240	129	971	322	..	..
December	1	......	....	105	56	3	..	5	3187	127	1020	360	6	..
January	1	......	....	65	66	6	1	4	3092	123	820	331	..	..
February	1	......	....	47.10	54	12	12	4	2846	113	1126.10	381	..	..
March	1	......	....	57.10	40	9	..	4	3350	134	1261	419	..	..
April	1	......	....	97	94	11	14	5	3791	151	499	138	3	..
May	1	......	....	75	55	12	..	5	4076	163	1924	453	3	19
June	1	......	....	67	65	11	10	5	3872	154	904	332	8	..
July	1	......	....	......	..	..	..	6	8486	339	1380	506	5	..
August	1	......	....	148	93	3	..	6	7891	315	1395	415	7	..
September	1	......	....	20	6	..	..	6	9157	366	668	232	10	..
Total	....	......	....	717.20	560	19	19	....	56110	....	12659.10	4181	18	19

MONTHLY STATEMENT FROM EACH GOLD DISTRICT.—*(Continued.)*

MONTH.	CARIBOU.							UNIACKE AND SOUTH UNIACKE.						
	No. of Mines.	Days' Labor.	No. of Men.	Tons Crushed.	Yield of Gold.			No. of Mines.	Days' Labor.	No. of Men.	Tons Crushed.	Yield of Gold.		
					Oz.	Dwts.	Grs.					Oz.	Dwts.	Grs.
October	5	2517	100	1075	261	10	12	4	1031	41	90	133	10	11
November	6	2782	111	923	215	18	12	4	1554	62	264	280	16	18
December	6	2469	98	1047	366	..	..	4	1584	63	209	239	16	11
January	5	1699	67	578	107	17	12	4	1737	69	139	187	12	18
February	4	1401	56	710	203	11	..	4	1707	68	305	241	3	18
March	4	2068	82	628	393	5	..	4	2121	84	237	140	16	..
April	5	1600	64	864	312	18	..	4	984	39	477	379	3	..
May	5	1820	72	731	369	2	..	4	953	38	108	143	1	..
June	5	2037	81	1114	269	7	13	4	837	33	146	161	12	..
July	5	2546	101	971	245	3	..	2	468	18	104	120	11	..
August	5	2343	93	673	37	..	18	2	427	17	110	112	4	..
September	5	2127	84	......	....	..	..	2	392	15	130	134	2	..
Total	..	25409	....	9324	2781	13	19	..	4985	..	2349	2274	9	4

MONTHLY STATEMENT FROM EACH GOLD DISTRICT.—(*Continued.*)

MONTH.	STORMONT.							WAVERLY.						
	No. of Mines.	Days' Labor.	No. of Men.	Tons Crushed.	Yield of Gold.			No. of Mines.	Days' Labor.	No. of Men.	Tons Crushed.	Yield of Gold.		
					Oz.	Dwts.	Grs.					Oz.	Dwts.	Grs.
October	6	4307	172	2499	550	18	..	1	550	22	90	39	9	..
November	6	4336	173	2496	600	9	..	1	485	19	91	26	10	6
December	7	4299	171	2875	707	2	22	1	500	20	129	56	16	12
January	3	3670	146	2378	235	1	6	1	319	12	35	16	11	..
February	3	3380	135	2399	371	..	..	1	350	14	48	32	7	..
March	4	3521	140	926	537	11	7	1	318	12	75	49	12	..
April	2	3321	132	2477	528	13	..	1	221	8	68	38	15	6
May	2	3075	123	2396	528	5	..	1	180	7	44	41	13	..
June	2	3262	130	2448	541	10	14	1	247	9	99	62	15	..
July	2	3636	145	2728	628	1	9	3	719	28	34	29	1	..
August	2	3241	129	2569	540	19	..	2	640	25	93	67	18	..
September	2	3338	133	2509	440	4	..	3	702	28	......	..	..	..
Total	....	43486	....	28700	6209	18	10	....	5231	....	806	461	8	..

MONTHLY STATEMENT FROM EACH GOLD DISTRICT.—*(Continued.)*

MONTH.	Central Rawdon.							Killag.						
	No. of Mines.	Day's Labor.	No. of Men.	Tons Crushed.	Yield of Gold.			No. of Mines.	Days' Labor.	No. of Men.	Tons Crushed.	Yield of Gold.		
					Oz.	Dwts.	Grs.					Oz.	Dwts.	Grs.
October	1	1226	49	39	15	7	..	1	81	3	3	13	2	..
November	1	1134	45	75	12	..	..	1	75	3	2	22	11	..
December	1	1123	44	187	49	..	..	1	72	2	......	..	..	..
January	1	1128	45	130	25	10	..	....	......	....	......	..	..	..
February	1	1167	46	......	..	..	..	....	......	....	10	35	4	..
March	1	1173	46	......	..	..	..	....	......	....	......	..	..	..
April	1	1094	43	......	..	..	..	....	......	....	9	64	10	..
May	1	1172	46	......	..	..	..	....	......	....	11	48	14	..
June	1	1189	47	190	25	4	..	....	......	....	17	51	10	..
July	1	1127	45	120	22	18	..	....	......	....	16	67	10	..
August	1	1102	44	10	3	3	..	....	......	....	19	38	..	..
September	1	1096	43	212	46	10	..	....	......	....	25	53	6	..
Total	..	13731	..	963	199	12	..	..	228	....	112	393	19	..

MONTHLY STATEMENT FROM EACH GOLD DISTRICT.—*(Continued.)*

MONTH.	WINE HARBOUR.							TANGIER.						
	No. of Mines.	Days' Labor.	No. of Men.	Tons Crushed.	Yield of Gold.			No. of Mines.	Days' Labor.	No. of Men.	Tons Crushed.	Yield of Gold.		
					Oz.	Dwts.	Grs.					Oz.	Dwts.	Grs.
October	....	....	....	15	11	4	..	....	186	7	......	..	..	..
November	....	....	....	61	31	6	..	....	242	9	......	..	..	..
December	....	....	....	50	23	..	..	....	271	10	12	5	4	..
January	1	235	9	50	31	19	12	1	350	14	......	..	..	..
February	1	150	6	80	50	9	14	1	340	13	......	..	..	..
March	1	175	7	45	36	2	..	1	218	8	105	48	18	..
April	....	....	....	......	..	..	..	....	152	6	25	12	..	..
May	....	....	....	......	..	..	..	....	334	13	72	59	12	..
June	....	....	....	......	..	..	..	....	375	15	42	48	..	..
July	1	247	9	110	56	2	..	1	537	21	36	32	..	..
August	1	372	14	200	78	..	..	1	627	25	80	44	..	..
September	1	104	4	......	..	..	..	1	428	17	......	..	..	..
Total	..	1293	..	611	318	3	2	..	4060	..	372	299	14	..

MONTHLY STATEMENT FROM EACH GOLD DISTRICT.—*(Continued.)*

MONTH.	Brookfield.							Fifteen Mile Stream.						
	No. of Mines.	Days' Labor.	No. of Men.	Tons Crushed.	Yield of Gold.			No. of Mines.	Days' Labor.	No. of Men.	Tons Crushed.	Yield of Gold.		
					Oz.	Dwts.	Grs.					Oz.	Dwts.	Grs.
October	1	1462	58	510	292	..	..	2	1837	73	......	114	..	..
November	1	1312	52	376	219	10	..	2	1499	59	296	49	15	..
December	1	1402	56	418	250	..	..	2	1674	66	563	145	9	..
January	1	1511	60	250	161	..	..	1	1276	51	751	179	2	..
February	1	1648	65	450	236	..	..	1	1227	49	900	240	10	..
March	1	1758	70	700	444	..	..	1	1423	56	926	265	..	..
April	1	1826	73	680	362	..	..	1	1267	50	945	270	18	..
May	1	2017	80	1000	308	..	..	1	1353	54	890	254	10	..
June	1	1679	67	798	244	..	..	1	1531	61	900	233	..	..
July	1	1300	52	966	315	..	..	1	1582	63	910	269	4	..
August	1	1343	53	980	292	..	..	1	1442	57	1047	400	10	..
September	1	1406	56	972	349	..	..	1	1422	56	1000	445	..	..
Total	..	18664	..	8076	3366	10	..	..	17533	..	9158	2856	18	..

MONTHLY STATEMENT FROM EACH GOLD DISTRICT.—*(Continued.)*

MONTH.	Millipsigate.							Oldham.						
	No. of Mines.	Days' Labor.	No. of Men.	Tons Crushed.	Yield of Gold.			No. of Mines.	Days' Labor.	No. of Men.	Tons Crushed.	Yield of Gold.		
					Oz.	Dwts.	Grs.					Oz.	Dwts.	Grs.
October	1	251	10	......	..	..	..	....	....	....	50	5	18	12
November	1	326	13	......	..	..	..	....	....	....	9	2	..	..
December	2	380	15	......	..	..	..	....	....	....	10	1	9	..
January	2	373	14	......	..	..	..	....	....	....	24	31	18	..
February	2	318	12	......	..	..	..	....	....	....	8	38	..	..
March	2	230	9	......	..	..	..	....	....	....	14	11	14	..
April	2	118	4	80	43	18	..	....	....	....	......	..	..	..
May	2	190	7	......	..	..	..	....	....	....	41	7	14	12
June	2	198	7	......	..	..	..	....	....	....	35	14	5	18
July	2	145	5	......	..	..	..	....	....	....	......	..	..	..
August	2	373	14	......	..	..	..	....	....	....	117	169	5	12
September	2	549	21	87	38	9	..	....	....	....	......	..	..	..
Total	..	3451	..	167	82	7	..	....	....	....	308	282	5	6

MONTHLY STATEMENT FROM EACH GOLD DISTRICT.—*(Continued.)*

MONTH.	GOLD RIVER.							MONTAGUE.						
	No. of Mines.	Days' Labor.	No. of Men.	Tons Crushed.	Yield of Gold.			No. of Mines.	Days' Labor.	No. of Men.	Tons Crushed.	Yield of Gold.		
					Oz.	Dwts.	Grs.					Oz.	Dwts.	Grs.
October	2	......	....	66	93	10	19	1	282	11	85	12	1	..
November	1	......	....	88	156	..	..	1	232	9	68	76	9	..
December	1	......	....	......	..	..	..	1	142	5	92	11	5	16
January	....	266	10	39	40	14	..	2	669	26	63	105	12	..
February	....	255	10	......	..	..	..	2	796	31	27	10	17	15
March	....	308	12	46	18	11	..	2	692	27	70	66	16	..
April	1	......	....	6	33	19	7	1	671	26	120	74	14	9
May	1	......	....	3	..	13	19	1	625	25	84	63	15	15
June	1	......	....	5	82	9	7	1	602	24	69	138	13	18
July	2	......	....	6	26	5	..	3	837	33	73	262	15	10
August	2	......	....	12	45	15	5	3	1003	40	115	192	14	15
September	4	......	....	16	45	..	20	3	1145	45	90	161	5	5
Total	..	829	....	287	542	19	5	..	7696	..	956	1177	1	7

UNPROCLAIMED AND OTHER DISTRICTS.

MONTH.	No. of Mines.	Days' Labor.	No. of Men.	Tons Crushed.	Yield of Gold.		
					Oz.	Dwts.	Gr.
October	4	359	14	70	8	5	..
November	4	328	13	45	131	11	4
December	2	674	26	250	112	15	..
January	2	399	15	65	64	12	..
February	2	287	11	35	34	14	20
March	2	458	14	19	26	15	..
April	1	96	3	75	61	11	22
May	2	205	8	......	..	..	..
June	2	142	5	22	9	10	6
July	5	647	25	110	20	12	23
August	4	673	26	104	37	12	7
September	5	696	27	134	117	17	16
Total	..	4554	..	929	625	18	2

PRODUCTION BY DISTRICTS FROM 1862 TO 1896.

DISTRICT.	Tons Crushed	Total Yield.			Value @ $19 per Oz.	Average yield per ton.		
		Oz.	Dwts.	Gr.		Oz.	Dwts.	grs.
*Caribou & Moose River.	96848	38024	18	20	$ 722473 89	0	7	20
Montague	21696	37894	1	19	719987 70	1	14	22
Oldham	45100	48990	10	18	930820 22	1	1	17
Renfrew	48142	33869	8	2	643518 68	0	14	1
Sherbrooke	173130	123323	18	8	2343154 42	0	14	6
Stormont	80316	42313	19	13	803965 57	0	10	13
Tangier	42720	20192	17	10	383664 55	0	9	11
†Uniacke	50656	35683	12	8	677988 72	0	14	2
Waverley	121540	60847	1	2	1156094 03	0	10	0
‡Salmon River	95601	39373	7	18	748094 37	0	8	5
÷Brookfield	14360	11534	5	4	219150 91	0	16	1
÷Whiteburn	6343	9535	15	18	181179 97	1	10	1
§Lake Cacha	20734	22757	1	20	432384 74	1	1	23
¶Rawdon, East Central.	12158	9592	7	4	182254 81	0	15	8
Wine Harbour	42711	29140	8	7	553667 88	0	13	5
**Fifteen Mile Stream	27738	15346	3	5	291577 05	0	11	1
Malaga, from '89 to '93.	18567	15180	5	8	288425 07	0	16	8
Unproclaimed & Other Districts	62522	44722	10	3	849727 62	0	14	7
Total to 30th Sept. 1896.	980882	638322	12	19	$12128130 20	0	13	0

*From 1869. †From 1866. ‡From 1883. ÷From 1887. §From 1882. ¶From 1887. **From 1883.

RETURNS YEAR ENDED SEPTEMBER 30, 1897.

THE NOVA SCOTIA STEEL CO., LT'D.

CAMERON AND GRANT MINES.

BRIDGEVILLE, PICTOU CO.

Above ground.

	No.	Day's labor.
Skilled labor	6	1663
Laborers	8	1759
Boys	1	167

Below ground.

	No.	Day's labor.
Skilled labor	20	5595
Laborers	33	6914
Boys	1	265

Tons of ore raised, 27,001.